Summer Issue, 1958

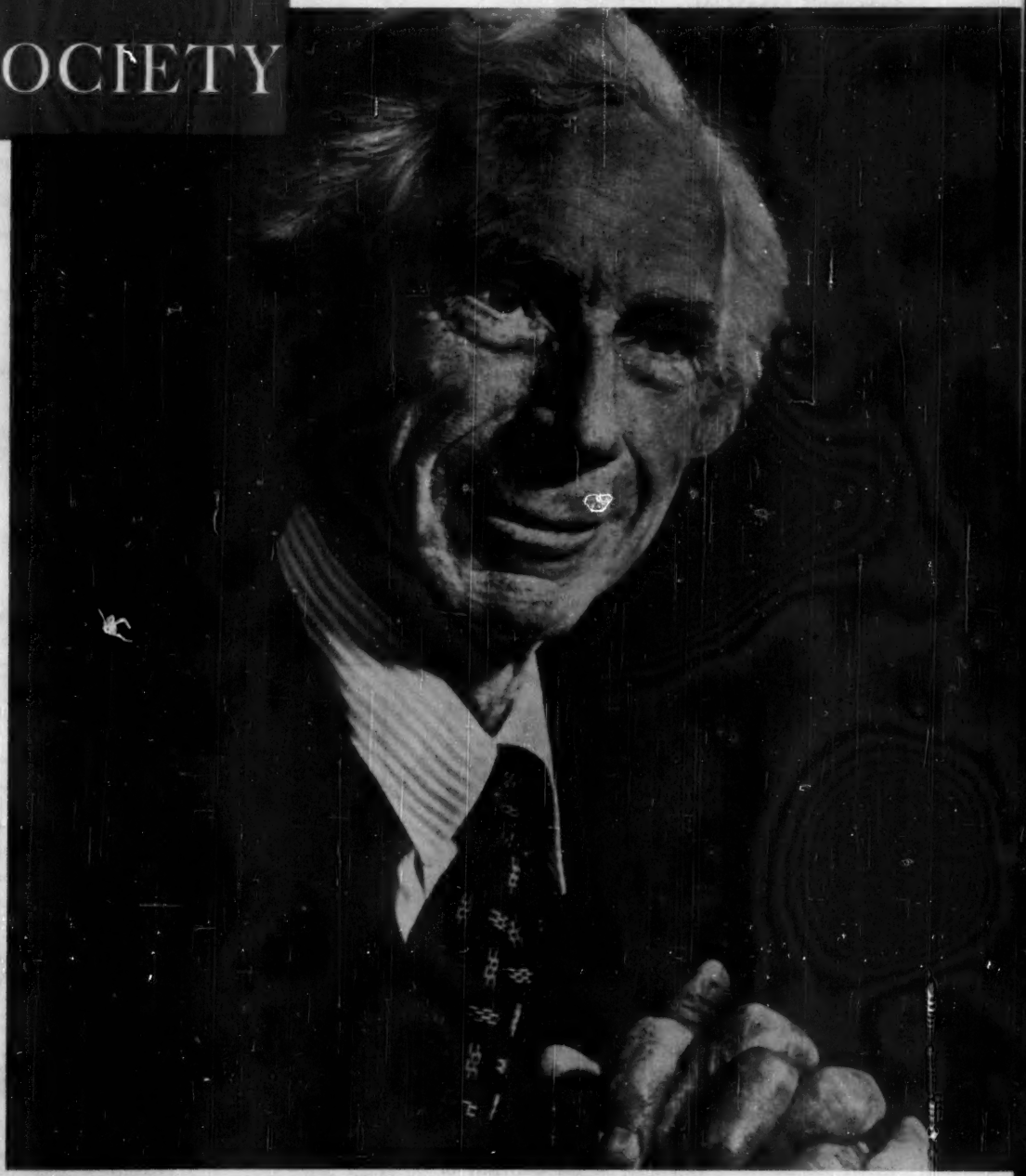
SCHOOL *AND* SOCIETY

Comments on Second Report by President's Committee on Education Beyond High School

BY BEARDSLEY RUML

SOME RESULTS OF 8 YEARLY STUDIES OF TV

BY PAUL WITTY



BERTRAND RUSSELL on the Role of Science in Education

Educational Ticker Tape

If additional, detailed information is desired concerning news items in this column, write to SCHOOL AND SOCIETY'S Information Service, enclosing 50 cents for each item requested.

RECESSION IS CAUSING CRISES IN SCHOOL FINANCING

The present recession is threatening the present level of school financial support. Federal support of public education is urgently needed to ease existing crises in state and local school financing. This testimony was given by Walter W. Heller, chairman, department of economics, University of Minnesota, who represented the National Education Association at the House of Representatives Education Subcommittee hearings, April 30, on proposed school legislation.

Dr. Heller testified that the recession is causing a strong decrease in school bond approvals. The value in school bonds submitted to American voters in the last half of 1957 was one-third less than the value submitted in the last half of 1956. In school bond elections the value of bonds rejected in the last half of 1956 was only nine per cent; this jumped to 31% in the last half of 1957. "The result," said Dr. Heller, "has been a 50% reduction in the value of school bonds approved by the American people in one year's time."

Emphasizing the difficulty that state and local governments will have in supporting public education, Dr. Heller said that since 1946 state and local debt has increased nearly 250%, while the Federal debt has risen only five per cent. "Superimposed on rising prices for local governments is the sharply rising cost of money. In 1951 municipal bonds cost only 78% of what Federal money cost; [in March, 1958] it was 105%. It now costs more to borrow money locally than it does nationally.

"We may project a rise of at least 50% in over-all state and local spending for schools in the next eight years. Such increases will strain state-local tax sources to the limit—or beyond." Dr. Heller said that Federal support, as embodied in HR 10763, the Metcalf Bill, could play a timely and appropriate role in the government's anti-recession policy.

U.S.-SPONSORED SURVEY OF EDUCATION INSIDE U.S.S.R.

A month-long survey of education inside the Soviet Union, the first government-sponsored study of this kind, has been made by a team of 10 U. S. educators. The study team, headed by U. S. Commissioner of Education Lawrence G. Derthick, was made possible by the agreement of Jan. 27, 1958, between the U. S. and the U. S. S. R. on exchange of missions in cultural, technical, and educational fields. In the future, a group of Soviet educators will make a similar study of education in the U. S.

Commissioner Derthick said the project is in line with the Office of Education's responsibility to keep abreast of educational developments in other parts of the world. In addition to the Commissioner, the team included Herold C. Hunt, Eliot Professor of Education, Harvard University; Harry C. Kelly, assistant director for scientific personnel and education, National Science Foundation; A. John Holden, Jr., Commissioner of Education, Vermont; Henry Chauncey, president, Educational Testing Service; and George Z. F. Bereday, associate professor of education, Columbia University.

NO DEPENDABLE CRITERIA FOR PREDICTING HIGH-SCHOOL STUDENTS' COLLEGE SUCCESS

Program of studies followed by a high-school student has little value as a guide to his eventual success in college, a study group reported to the Allerton House Conference on Education (April 18) at the University of Illinois conference center. This finding, based on a five-

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SCHOOL AND SOCIETY is published biweekly, except in July and August, by the Society for the Advancement of Education, Inc., 1834 Broadway, New York 23, N. Y. Second-class mail privileges authorized at New Haven, Conn.

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Subscription: $7.50 (1 year), $14.50 (2 years). Add $1.00 per year for postage on foreign orders.

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A specialist in the field of physical education and a highly experienced instructor of prospective elementary school teachers have pooled their respective talents in producing this thoroughly useful book, rich in theory and step-by-step classroom techniques. The book details 100 new activities.

Published Spring 1958

FUNDAMENTALS OF PUBLIC SCHOOL ADMINISTRATION, Fourth Edition

by WARD G. REEDER, The Ohio State University

Studying all types of school systems from the viewpoints of the school board members, school superintendents, principals, and teachers, this work emphasizes the interrelationship of their roles. This revision includes an amplification of the sections on instructional materials, school business matters, and relationships with pupils and school employees.

1958, 644 pages, $5.90

DIAGNOSTIC AND REMEDIAL TEACHING: A Guide to Practice in Elementary and Secondary Schools, Revised Edition

by GLENN MYERS BLAIR, University of Illinois

This book advances practical methods for overcoming basic pupil disabilities on both the elementary and secondary school level. Incorporating new materials and techniques for assisting severely retarded pupils in the fundamentals of reading, arithmetic, spelling, handwriting, and English usage, the author includes full descriptions of remedial programs that have proven successful.

1956, 416 pages, $5.50

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by MIRIAM BLANTON HUBER, Specialist in Children's Literature and Reading

1955, 812 pages, $6.25

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by MARGARET G. McKIM, University of Cincinnati

1955, 528 pages, $5.50

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by VIKTOR LOWENFELD, Pennsylvania State University

1957, 541 pages, $5.90

THE PSYCHOLOGY OF ADOLESCENCE

by ARTHUR T. JERSILD, Columbia University

1957, 438 pages, $5.25

The Macmillan Company

60 FIFTH AVENUE, NEW YORK 11, N.Y.

Comments on Second Report by President's Committee on Education Beyond the High School

By BEARDSLEY RUML
New York City

1. Organization at the Federal Level.—Potentially, the most constructive and far-reaching of all the Committee's recommendations in its Second Report is its calling on the Secretary of Health, Education, and Welfare to develop for the President's consideration "specific proposals on the best means for setting up whatever machinery may be necessary (a) to further a continuous and orderly review and development of the national and intragovernmental aspects of education beyond the high school, and (b) to fulfill the other needs relating thereto which are identified in these conclusions and recommendations" (Chap. V, Recom. 10). This recommendation should apply not only to education beyond the high school, but to all education of public concern whether before, during, or beyond the so-called secondary level.

The importance of this recommendation is obscured by its position in the report and by the language in which it is stated. If necessary, it should be discussed in a Chapter VI of its own, and Recommendation 11 might be included with it. Recommendation 11 states in part, "The United States Office of Education [should] be . . . strengthened . . . as a matter of highest priority; (1) to increase . . . the effectiveness of its reporting services; (2) to provide more technical and staff services; and (3) to encourage . . . experimentation in institutional management and teacher effectiveness."

The Committee might well make a suggestion or two to give concreteness as to the kind of proposal that might meet the need. The Committee has indicated negatively that the 1954 authorization (never acted upon) for a national advisory committee on education was inadequate, but that this might be better than nothing at all. Perhaps, but such a halfway measure might remove the pressure for action at the level and of the scope that consideration of the problems of education over the years in the United States clearly requires.

A suggestion of this character was made by me in a speech at the University of Minnesota in March, 1956. Following the example of the Employment Act of 1946, the proposal is that there be enacted an Education Act of 195x asserting a national concern in education. It is astonishing how closely an Education Act could follow the language of the Employment Act.

For example, the preamble might read, "The Congress hereby declares that it is the continuing policy and responsibility of the Federal Government consistent with the constitutional rights, the privileges and the duties of the states, to utilize all its plans, functions and resources for the purpose of creating and maintaining conditions under which there will be afforded useful educational opportunities, including self-education, for those able, willing and seeking to learn." A draft of a bill which sets forth in detail the sort of provisions that might be adopted is available on request.

The setting up of a Joint Committee on Education and a Council of Educational Advisers would not reduce the purposes and activity of the Department of Health, Education, and Welfare any more than the Employment Act limited the work of the Department of Commerce, the Department of Labor, or the Treasury. On the contrary, supplying adequate statistical and factual information on the status of education would be one of the more important specific services to be performed by the Department of Health, Education, and Welfare.

2. Financial Problems.—The Committee's Second Report places great stress, and properly so, on the problems of financing higher education (Chap. IV). The Committee states, "Basic to the solution of most problems in post-high-school education is the availability of adequate financial means to provide the needed resources." That is to say, *with* adequate financial means most problems of higher education can be solved; *without* adequate financial means many problems of higher education cannot be solved. Finance is therefore not an afterthought to a program for higher education to be worked out some time some way; it is an essential consideration in planning for the future of higher education in America.

Where will the money come from? And what are the *needed* resources? And what should be the priorities in the use of funds?

The report discusses the possible sources of funds. In my opinion, there is too much optimism about the possibilities of corporate giving,

but something more than today's total can be expected.

Income from tuitions can be increased. The tuition rate is now pretty high for some private institutions, but for many, a significant increase in rate is possible and may be desirable. An important increase in the availability of funds from tuition sources can come from discontinuing the giving of scholarships from tuition or other income not specifically designated for scholarship purposes. The increase in demand for admission will make it possible to cut scholarships to funds specifically earmarked for scholarships. The provision of scholarships is the duty of other elements of the community—organized and unorganized—not of the institutions whose purpose it is to provide higher education as a service to the community. This latter point is not discussed in the Second Report.

The tuition policy of our state institutions of higher education requires revision. These tuitions are so very low, so far below even the costs of instruction, that they constitute in fact a substantial scholarship to every student whether he requires one or not. In so doing, the publicly supported college or university is placed in a competitive position against the private institution which was unintended and is beginning a work of destruction of private higher education that must be reversed.

There is no reason why the tuition fees in public colleges and universities should not be raised substantially, at least to a direct cost of instruction basis, and for the students within a state that need and deserve financial aid, state scholarships and loan funds could be granted. These resources might be available for use in both public and private institutions within the state, to the great advantage of preserving the variety of educational opportunity which the two types of educational institutions make possible.

If the tuitions in public institutions were raised to such levels, there would be no need for two standards for tuitions, one for in-state and one for out-of-state students. In spite of certain praiseworthy, special attempts at interstate university co-operation, the present tendency is toward barriers against the flow of students from state to state, a tendency to the Balkanization of education at the higher levels which is obviously contrary to the national interest.

What are the *needed* resources? This question is inadequately analyzed in the report.

Let us assume the validity of today's purposes for higher education in all its varieties. Let us assume also the extension of these purposes to an expanding population. The question remains as to whether present resources are being used with reasonable efficiency, and, therefore, whether future or even present needs for money can be inferred from the prevailing use of resources now at hand.

It is evident from the Committee's Second Report that the Committee is far from satisfied with the prevailing efficiency of higher education. But its comments on efficiency are scattered through its report. Here are a few quotations: "The Committee recommends . . . emphasis be given . . . to all appropriate measures which can bring about greater efficiency in the management and utilization of the facilities of the institutions—including further improvements and innovations in cost accounting, management practices, etc." (Chap. IV, Recom. 4, p. 89). No reference to the curriculum here. But on p. 31, in a chapter on the Need for Teachers, we find the following observation: "The proliferation of narrow course offerings is worthy of note. . . . The result may be to dissipate teaching resources without necessarily strengthening the student's education. The Committee *strongly* suspects that the *majority* of colleges and universities (italics are mine) could improve the quality of education offered by reducing *substantially* (also my italics) the number of courses offered and using the resources thus released, including faculty and student energies, to improve the rest."

In spite of the obvious locus of responsibility in the faculties for the current situation which the Committee "strongly suspects" exists in the "majority of colleges and universities," the Committee nevertheless "urges that faculties themselves, being best qualified to do so, earnestly and periodically review their own institutions' curricula in the light of students' educational needs, major objectives and available resources."

The Committee is aware that efficiency in the use of resources is indicated in part by the ratio of students to teachers. It states, again in Chapter I, The Need for Teachers, p. 32, "Current experimentation on class sizes should be watched with keen interest. . . . Such experimentation [should] be stepped up so that valid uses of large group instruction can be widely applied." In Chapter IV on the Financing of Higher Education, p. 85, the Committee relates these observations to the question of need for resources, somewhat timidly to be sure. The Committee states, "To most observers it appears likely that the over-all ratio will gradually change in the direction of more students per teacher. The ratio of full time equivalent faculty members to all stu-

dents was about 1:17. The Committee has not entered into the current speculations about its future size, but it does observe that substituting a ratio of, say, 1:20 would have produced a cut in the 1970 cost projection of about half a billion dollars. Better teachers more adequately compensated, and with more assistance for nonteaching duties, could make this possible." This analysis is not only timid; it is superficial. It does point up wastes in the present curricula and in present methods of instruction. The possibilities are much greater than the Committee suggests for 1970. And much can be done for 1965 and even for 1960. The Committee does not mention these earlier dates in which many parents, students, and members of faculties have a more lively interest.

A Ratio of 20 to 1.— A detailed analysis will bring out many of the educational and financial implications of a reorganization of the curriculum to give a student-teacher ratio of 20 to 1. Before proceeding to the analysis, however, certain observations must be made.

1. This discussion refers to the traditional four-year liberal college, and in most respects it applies to the four-year liberal college element in the university as well.

2. The quantitative assumptions are to be taken as *a frame to work with*, subject to many variations. They are *not a straight jacket* that would force an unwelcome uniformity. The critical average figures may be obtained with a wealth of variation in detail.

3. The new Dartmouth calendar is taken as the structure of the academic year. This calendar calls for three terms of about 10½ weeks; later, perhaps four terms; however, the standard full year is a three-term year. The standard student week provides three courses meeting four times a week, a total of 12 sessions in class each week for each student. This change from a previous five-course 15-hour week was adopted by the faculty in response to a desire for "more learning, less teaching" in the liberal college program.

4. Increase in ratio of student to teacher does not mean an increase all along the line in size of class. It does mean a greater and an educationally more effective use of the lecture method of instruction. The lecture method is discussed later [in this article].

5. For purposes of analysis here, a hypothetical college is taken and is assumed to have 1,000 students and to have a tuition charge of $600. This college is assumed to break even financially in its room-and-board operation; to pay for its administration, maintenance, library, and athletic fields out of income on endowment and annual contributions of alumni and friends; to divert no tuition income to scholarships and to credit the budget for instruction with full tuition charges for all students on scholarship; and, finally, to break even on all extra-curricular activities —athletic, intercollegiate, or otherwise. This may involve an extra charge above tuition.

Under these conditions, which are supported by a certain logic, the tuitions paid by the students would go 100% to the faculty for instruction. There is a certain logic to this, too.

6. Finally, we assume that the teaching staff is devoting an average of 9⅓ hours a week to teaching in the classroom.

Given these assumptions, it is possible to proceed with the analysis.

A college of 1,000 students, each student in class for three courses four times a week—that is, 12 hours a week—would require 12,000 student hours of instruction each week. If the ratio of students to faculty is 20:1, this means a faculty of 50 members. If the average teaching time of the faculty is 9⅓ hours a week, the faculty would provide 466 teaching hours per week. With courses meeting four times a week, this means 116 courses being offered by a faculty of 50 members, or an average of slightly more than two courses per faculty member in any one term.

In any one term, 116 courses would be offered. It is convenient to classify these courses as: A. Large lectures, averaging 250; B. Small lectures, averaging 83⅓; C. Discussion-seminars, averaging 10.

It is necessary to provide 12,000 student hours of instruction per week from these courses. This can be done in many ways; below is one example:

4 Type A courses, 250 students, 4 hours per week 4 x 250 x 4 =	4,000
12 Type B courses, 83⅓ students, 4 hours per week 12 x 83⅓ x 4 =	4,000
100 Type C courses, 10 students, 4 times per week 100 x 10 x 4 =	4,000
	12,000

Note that in any term there will be offered six times as many discussion seminars of an average of 10 students as the total of *both* types of lecture courses. Note, too, that the four Type A courses involve the attendance of all members of each of the four classes, and therefore these four courses must be designed with the liberal objective of the college constantly in mind. They cannot be elementary subject-matter courses nor can they be pre-professional, since all students must take all of them. (A small number of exceptions may be made.) However, there is reasonable latitude in the 12 Type B courses and abundant choice in the Type C courses of which 100 could be offered simultaneously every year.

This analysis shows that a faculty of 50 could teach a college of 1,000 students with a reasonably low teaching schedule and provide variety

of subject matter, experience, and method in the liberal college. Such a program, properly designed and competently staffed, would offer a first-class liberal education and a broad introduction to learning. It will not be welcomed by a departmentalized faculty, since it is not designed primarily to serve departmental interests. That is why, for many, many institutions of higher learning, the Committee's recommendation that the review of "their own institution's curricula by the faculties themselves, being best qualified to do so," is a sterile recommendation. Progress in eliminating waste in the curriculum will come only from the leadership of a few individuals—in faculty, administration, trustees, and alumni, with a following from dedicated associates. Then, with the acceptance by the institution of reasonable methods of attaining goals in the general interest, a positive, over-all program can be begun.

Next, it is important to examine the salary possibilities in the type of college we have just described. To repeat, the college would have a faculty of 50, 1,000 students, and tuition at $600. This college would break even on it charges for room and board, would divert no portion of tuition receipts to scholarships or student aid, and would balance its administrative, maintenance, and facilities budget by receipts from endowment and current gifts. (The last requirement will prove difficult for many colleges.)

Under these conditions, all tuition receipts could go to faculty salaries. This means a total of $600 times 1,000 students, or $600,000; and for 50 members of the teaching staff, an average annual salary of $12,000. Such an average could be the result of many forms of salary distribution. Here is one distribution that can be defended, but it is by no means the only one.

8 top salaries averaging	$20,000 =	$160,000
20 middle salaries averaging	12,000 =	240,000
22 junior salaries averaging	8,000 =	176,000
Aides for 48 lecture courses, averaging	500 =	24,000
		$600,000

This gross compensation for any individual includes payments that are made by the college for pensions and for sabbatical-year allowances. Such deductions may run as high as 30% in some colleges, but even so, a top average cash payment of $14,000 is obtainable.

It is important to note that this scale is possible for a college of 1,000 students and a tuition of $600. It is very difficult to work out a plausible curriculum and acceptable salary schedule for a college of less than 1,000 students or a tuition less than $600. In my opinion, these figures should be taken as a theoretical minimum.

As numbers of students and rate of tuition increase, a marked increase in flexibility is gained. The pattern for a college of 1,500 with a tuition of $750 has far greater potentialities than has a smaller institution. This does not come from increasing student-teacher ratio, but from flexibility both in curriculum and faculty salary scale.

A very limited experience in discussing such a proposal is indicated by great sensitivity on the part of some faculty members when it comes to matters of largely increased compensation. Some view it as a bribe to get inconvenient and therefore unwelcome changes in the curriculum. One said, "Do you think I am teaching for money?" Another said, "I'm no prostitute."

It is necessary to stand on the position that the salaries must be raised whether or not the present incumbents deserve or want them, since tenure must be respected. A substantially higher scale is required to draw into the teaching profession at the college level talented members of the present undergraduate generation who find the current financial outlook for the long pull too bleak to support a family at an acceptable standard of living. This reasoning supports the position taken by the Committee.

However, the Committee is incorrect in its statement (p. 46) that "the inequitable pay is a subsidy to the student and to society . . . a contribution which neither the student nor the community should accept." The fact is that the "inequitable pay" results substantially from inefficiency and waste in the organization of the curriculum and methods of instruction. There is plenty of money now being paid in tuition fees to support an adequate salary scale as defined by the Committee, certainly for liberal instruction in colleges of 1,000 or more. The present statement of the Committee, although appealing, should be removed from the report not only because it is false, but also because it satisfies a prevailing masochism which is the deep enemy of change, particularly a change for the better, where pity will be set aside and expectation of performance can be substituted.

A word should be said about the lecture method of instruction. It is commonly felt that the lecture is a poor substitute for a seminar or a discussion group. However, the lecture is a method of teaching that has its own place and, well done, has its own validity. It is resisted by many faculty members because they have had no training or experience in lecturing, and lecturing is in fact much more exacting than "handling" a class of 40 or less. Fortunately, not much lecturing or many lecturers are required. In the ex-

ample we have used, only 16 out of 116 courses would be lecture courses, so at most only 16 out of a faculty of 50 would have to lecture at all.

The Committee in its report approves the lecture method, but its statement leaves much to be desired. The Committee refers (p. 32) to "lecture classes directed primarily at imparting knowledge or demonstrating techniques." These *are* uses of the lecture method, but they are *lesser* uses, and if more value in the lecture is not apprehended by the lecturer, he will put on a sorry performance, indeed.

The great value of the lecture is that it creates a situation where simultaneous mass communication may occur, where the emotional component, if not too strong, will transform in meaningful ways the relations of partially related subject matter, will assimilate the transformation as mental stuff for new understanding and exploration. The lecturer himself becomes creative on the platform and hears himself saying words and expressing ideas that had been for him formerly only a dim awareness.

True, "lecture classes directed primarily at imparting knowledge or demonstrating techniques" can always serve a useful purpose, but this is not the lecturing of Abelard who drew students by the thousands to the University of Paris and caused them to follow him from town to town as he was told to move along.

3. Saving for a College Education.—A widespread savings program, geared to the provision of two years' college expenses, would be both helpful and practical. A 15-year program of monthly savings, based on whatever compound interest base seems reasonable, is not an impossible burden for many families, unless, of course, there are too many children. The accumulation of $3,600, a reasonable figure for two years' expenses, would require only $20 a month, figuring no interest at all. Depending on interest assumptions, the monthly requirement would drop to $15.88 at 3% or to $14.67 at 4% compounded semi-annually, or the interest could be used to apply to the costs of further education.

I have been told that co-operation of the SEC would be helpful in setting the ground rules for the promotion of education thrift programs.

4. Expansion of Existing Institutions.—The Committee calls attention to the fact that existing institutions of higher education should be brought up in attendance before too much effort and money are spent in the establishment of new institutions. This is clearly desirable in the conservation of resources and it should be not too difficult in view of the potential demand for admission. It is desirable that some minimum figure be suggested for enrollment that would make possible an efficient liberal college, paying the kind of salaries to professors suggested by the Committee. My own feeling is that an undergraduate college of about 1,000 is the smallest that can be operated efficiently with a reasonable tuition, adequate salaries, and a necessary richness in the curriculum. The Committee after study might come to some different figure, and there would always be the "special situation." I do feel that some stated goal minimum would be helpful in our general thinking, particularly with respect to plant requirements.

5. Priorities.—"Prudence dictates that priorities be established," says the Committee (p. 88). And the general intent of the priorities as stated by the Committee seems wise, but some clarification is desirable.

The first priority is given to the payment of adequate salaries, but the conception of "adequacy" seems watered down here from earlier statements of the Committee. The salary "sufficient to attract the needed additional numbers of teachers of high ability" really gives very little to shoot at as compared with Recom. 2, p. 36, where "the Committee suggests that the goal be set at no less than double the present average level."

The suggestion that building plans be deferred presumably applies only to such building as competes with faculty salary increases. A college that decides to take a first step by increasing its ratio of students to teachers from 9:1 to 12:1 might well be confronted by need for dormitories and perhaps for lecture and other facilities. Under these circumstances, priority goes for building, since building makes possible the efficiency that creates important income for faculty compensation.

The priorities listed in the Recommendations do not conform to the discussion (p. 88). Statement 3 seems particularly unfortunate; "*if we are to increase the quality of our labor force*" is certainly not the single, and is hardly even a major, motive for improving the quality and availability of education beyond the high school.

6. Building Programs.—There is great promise of efficiency in building programs that are clearly associated with curriculum efficiency. The highest priorities should go to dormitories and lecture facilities for those colleges that are committed to the elimination of wasteful instruction. The money can be lent by the Federal government—or better yet, by a State Authority with access to tax-exempt funds. Colleges can well afford to pledge available capital funds if this

will contribute to increasing the student-teacher ratio.

Writing in the *New York Herald Tribune* on Aug. 18, 1957, sect. 2, p. 3, Fred Hechinger reports that the members of the Empire State Foundation of Independent Liberal Arts Colleges have 16,000 students and 1,632 members of their faculties, a ratio of less than 10 to 1. Here we have a situation which gives a statistical indication that these colleges could double their enrollment without increasing the numbers on the faculties, provided the faculties could do the job and the curricula were revised. If one or more of these colleges desired to enter into a program designed to increase efficiency of liberal instruction, certainly no inadequacy of building facilities should be permitted to hold them back.

7. Better Use of Plant.—The Committee calls attention to possible economies in better use of plant. Full summer sessions are clearly indicated, and better scheduling of instructional buildings will break some traditions but should be undertaken if savings in new building can be accomplished. However, scheduling classes for weekends is by no means obviously desirable, especially if a college goes on a three course, four session a week basis. On this point, experience and considerations not entirely academic will be the basis for judgment more intuitive perhaps than strictly logical.

8. Preparation for College Teachers.—It serves no purpose at the present time to discuss the preparation and recruiting of college teachers, since the reform of the salary scale—with many institutions paying an average of $15,000, with frequent maxima of $25,000-$30,000, for *teaching* proficiency in the *liberal* subjects—will change the whole outlook on teaching preparation and requirements. The conventional Ph.D. has broken down as an evidence of either research or teaching proficiency and perhaps in time we will be able to cap the Ph.D., or supersede it, by a D.Sc. and L.H.D. awarded in course to candidates who can demonstrate performance either as research scientists or teachers of science, or as scholars or teachers in humane letters. But the time for drastic change in the ordering of advanced degrees is not yet.

9. Admission of Students.—The present situation as to the admission of students is intolerable. It is not only wasteful of time and money, but it has devastating consequences of a personal character on students, parents, alumni, on the personnel of secondary schools, admissions officers, trustees, and legislators. Already there are instances where admission has been bought by coin of the realm.

And the pressures are sure to grow.

The admissions problem is under careful and continuous study by appropriate agencies representing all parties at interest. These agencies should intensify their efforts and criticize their procedures and results even more actively than at present.

One change that would be helpful would be to admit a large percentage of students, as many as 70%, shortly after the middle of their next to the last year of preparation, subject only to clear evidence of subsequent motivational deterioration, substantial error, or fraud. Even admission during the summer before the last year of secondary school would be a long step forward. An individual by the time he is a year and a half from admission will have shown whether he has the natural capacity for higher education and can be tested for his skill in the basic arts of communication and computation. All other subject matter is essentially irrelevant, and if reported should be used only as a basis for guidance in the institution to which he is admitted. The final year of preparation could then be directed toward the specific circumstances of the admitting institution, and much more could be done than is possible today in establishing a stronger motivational basis, an essential and often a decisive factor in the individual's apprehension of the true worth of higher academic studies.

NEXT ISSUE OF SCHOOL AND SOCIETY, SEPT. 13, TO LAUNCH NEW ACADEMIC YEAR

In accordance with our policy, announced last year, *School and Society* will not be published during July and August. The next biweekly issue will appear Sept. 13.

Special Issues on Educational Theory and on College and University Enrollments will be released in the new academic year. Other issues of *School and Society* will feature the following significant articles, including previews of forthcoming books, special conference reports, and extensive coverage of educational news events:

THE COLLEGE PROFESSOR AS TEACHER

The Professor and the Art of Teaching

A FURTHER CASE FOR PROGRESSIVE EDUCATION

Responsibilities of Educators, Scientists, Humanists

COMMUNICATION SKILLS: PROMISE OR THREAT?

Academic Freedom for the Educational Press

TEACHING EFFICIENCY AND CLASS SIZE

Some Southern Views on Desegregation

The Role of Science in Education[1]

By BERTRAND RUSSELL

THIS PRESENT OCCASION is one in which I am very happy to be a participant. I wish to express my warm gratitude to the Jury who awarded the prize and to the donor, Mr. Patnaik. My only regret is that, owing to old age, I am not able to go to India as I should have wished to do had it been possible.

I am very conscious of the importance of India both in the distant past as the inventor of the numeral zero and of the numbers which in the West are miscalled Arabic, and also as a rapidly increasing contributor to the corpus of scientific knowledge. I think that Dr. Patnaik deserves the gratitude of mankind for his recognition of the importance of popular science.

There was a time when scientists looked askance at attempts to make their work widely intelligible. But, in the world of the present day, such an attitude is no longer possible. The discoveries of modern science have put into the hands of governments unprecedented powers both for good and for evil. Unless the statesmen who wield these powers have at least an elementary understanding of their nature, it is scarcely likely that they will use them wisely. And, in democratic countries, it is not only statesmen, but the general public, to whom some degree of scientific understanding is necessary. To ensure wide diffusion of such understanding is by no means easy. Those who can act effectively as liaison officers between technical scientists and the public perform a work which is necessary, not only for human welfare, but even for bare survival of the human race. I think that a great deal more ought to be done in this direction in the education of those who do not intend to become scientific specialists. The Kalinga Prize is doing a great public service in encouraging those who attempt this difficult task.

In my own country, and to a lesser degree in other countries of the West, "culture" is viewed mainly, by an unfortunate impoverishment of the Renaissance tradition, as something concerned primarily with literature, history and art. A man is not considered uneducated if he knows nothing of the contributions of Galileo, Descartes and their successors. I am convinced that all higher education should involve a course in the history of science from the 17th century to the present day and a survey of modern scientific knowledge in so far as this can be conveyed without technicalities. While such knowledge remains confined to specialists, it is scarcely possible nowadays for nations to conduct their affairs with wisdom.

There are two very different ways of estimating any human achievement: you may estimate it by what you consider its intrinsic excellence; or you may estimate it by its causal efficiency in transforming human life and human institutions. I am not suggesting that one of these ways of estimating is preferable to the other. I am only concerned to point out that they give very different scales of importance. If Homer and Aeschylus had not existed, if Dante and Shakespeare had not written a line, if Bach and Beethoven had been silent, the daily life of most people in the present day would have been much what it is. But if Pythagoras and Galileo and James Watt had not existed, the daily life, not only of Western Europeans and Americans, but of Indian, Russian and Chinese peasants, would be profoundly different from what it is. And these profound changes are still only beginning. They must affect the future even more than they have already affected the present. At present, scientific technique advances like an army of tanks that have lost their drivers, blindly, ruthlessly, without goal or purpose. This is largely because the men who are concerned with human values and with making life worthy to be lived are still living in imagination in the old pre-industrial world, the world that has been made familiar and comfortable by the literature of Greece and the pre-industrial achievements of the poets and artists and composers whose work we rightly admire.

The separation of science from "culture" is a modern phenomenon. Plato and Aristotle had a profound respect for what was known of science in their day. The Renaissance was as much concerned with the revival of science as with art and literature. Leonardo da Vinci devoted more of his energies to science than to painting. The Renaissance architects developed the geometrical theory of perspective. Throughout the 18th century a very great deal was done to diffuse understanding of the work of Newton and his contemporaries. But, from the early 19th century on-

[1] Through the courtesy of Unesco. Address on receiving the Kalinga Prize from Luther H. Evans, Director-General, Unesco, in Paris, Jan. 28, 1958. The prize for the popularization of science was established in 1952 by Mr. B. Patnaik of India and is offered annually by Unesco.

wards, scientific concepts and scientific methods became increasingly abstruse and the attempt to make them generally intelligible came more and more to be regarded as hopeless. The modern theory and practice of nuclear physicists has made evident with dramatic suddenness that complete ignorance of the world of science is no longer compatible with survival. On this ground, above all others, I am happy to be associated in the work which the Kalinga Prize exists to promote.

Science and the Schools

By HOWARD E. KIEFER
State University Teachers College, Brockport, N. Y.

BERTRAND RUSSELL has described the essence of the scientific attitude as a willingness to put aside our personal desires in the face of the evidence. Such an attitude surely is rare; even a professional scientist may be expected to behave scientifically more often in his laboratory than in the world outside of it. One does not need to be a disciple of Freud to recognize as a serious possibility the notion that man never really may be able to escape being seduced by his own wishes, no matter how objective and scientific he attempts to be. If all this is true, it becomes obvious that the education of a scientist by no means is a simple matter. Because of this it too readily may be concluded that this business of producing scientists must be accomplished chiefly, if not entirely, at the university level. Surely, it is assumed, the public schools can do little more than provide for an introduction to the major scientific disciplines.

The weight of evidence would not seem to support this view. Significant research in the field of child and adolescent psychology seems to indicate strongly that attitudes and behavior patterns formed at an early age play no small part in determining the personality structure of the matured individual. The statement that the education of scientists must be a serious concern at all levels of instruction thus would appear to be more than a pious educational platitude. Unfortunately for the potential scientist, however, the science curriculum of the public schools often seems to concern itself too exclusively with a modest survey of scientific findings "appropriate for the level of instruction" at the expense of the development of scientific attitudes and habits of thought. When the dogmatic acceptance of scientific findings seems to be required, the student readily turns to the memorization of facts and the accumulation of the recommended technical vocabulary in order to "succeed" academically. It is desirable, of course, for the student to become acquainted with scientific findings and vocabulary. But if he does this in an atmosphere of indoctrination and conformity, he is not receiving a scientific education.

Perhaps an even more regrettable state of affairs occurs when the science curriculum of the public school is structured primarily in terms of the immediate interests of children. To say this is not to insist that the interests of children should be ignored. The able teacher uses existing interests whenever and wherever he can in order to promote achievement. But education hardly can be called scientific when limited to just that much achievement which the student may find immediately satisfying. If Russell is correct in his description of the essence of the scientific attitude, it would seem to follow that the central psychological problem of motivation must not be viewed so narrowly as to exclude the development of an active appreciation and respect for the intellectual demands which are made on those who achieve a truly scientific education.

Sir Isaac Newton once stated: "If I have seen farther than Descartes, it is because I have stood on the shoulders of giants." Like many another statement of genius, this modest analogy has suffered no little misinterpretation. It would be a serious mistake to assume that Newton intended to convey either a false humility or the notion that scientific progress depends only upon a handful of super-intellects. The phenomenal development of science has shown that quite a different construct must be placed on Newton's statement. First, it has become clear that one of the chief characteristics of science is its capacity for self correction. This means not only that the acquisition of new evidence may permit the questioning of existing hypotheses; it also means that the bold questioning of existing hypotheses may facilitate the acquisition of new evidence. What is needed in science is *not* humility in the face of tradition, but intellectual nonconformity, a willingness to think and stand alone if necessary and dare to subject sacred cows to critical

analysis regardless of their genealogy. Second, the sciences have more in common than their method; as they have become increasingly abstract and complex, they also have become increasingly corporate ventures. The resultant demand for intellectual co-operation in no way contradicts the need for intellectual individuality discussed above; it only serves to point up the urgent need for thorough scholarship and the broadest and most complete kind of intellectual background that modern education may be able to provide.

If the above remarks are not wholly mistaken, the implications they have for public-school education would seem to be many. First, the education of scientists cannot be assumed to be the responsibility only of the university. Second, the public schools must inculcate an early respect not only for the scholarly command of scientific evidence, but for the searching and questioning attitude of mind which scientific progress requires. Third, the public schools must provide the kind of broad intellectual background which enables the student to avoid the narrowness of vision of the superficially educated. Fourth, the public schools must attempt to provide this kind of education for all, not just for the scientist-to-be. It still is true that high-school education is the terminal education of the majority of American citizens. Science cannot be expected to flourish in an atmosphere of misunderstanding, with the resultant fear and distrust which misunderstanding generates. Certainly the schools should not be expected to abandon their efforts to provide for the personal and social adjustment of the student in order to provide for his intellectual development and scholarly achievement. But neither must intellectual development and scholarly achievement be abandoned for personal and social adjustment. The problem is a matter of emphasis and balance; we must have both, not one *or* the other. Must we assume that there has to be a high negative correlation between social adjustment and intellectual achievement? If such would appear to be the case under existing public-school curricular practices, there would seem to be no greater justification for their immediate modification.

If it is true that the present age will become increasingly scientific as time goes on, the schools cannot provide better for the adjustment of the future citizen than to familiarize him with science, its methods and procedures, its findings and habits of mind.

Mathematics and Science Ability in Taiwan Schools[1]

By WILLIAM G. RODD
Graduate Student, Western Reserve University

THE LAUNCHING of earth satellites has brought the realization that a greater pool of scientific minds is needed to enable the free world to regain and then maintain a position of scientific superiority in the cold war era. Educators and scientists in the United States are becoming increasingly aware of the scientific potential that exists in other free world countries. Such a potential exists on Taiwan (Formosa), and this report presents a description of the latent capabilities there.

On Taiwan there are two groups of Chinese with quite different cultural backgrounds. Some were forced to flee to Taiwan from the Chinese mainland in 1950 in the face of superior Communist forces and there are those who are called "Taiwanese" who have lived on that island all of their lives. Although the Taiwanese and the Chinese mainlanders are two diverse cultural groups, historically both come from the same Chinese mainland ethnic stock.

The writer conducted a cross-cultural study in 1955 in the 11th grade of the Taiwan middle schools where a group of students, unique in background, was made available by the school authorities. At the 11th-grade level there were children who were born on the Chinese mainland about the time the Japanese invaded China in 1937. Their pre-school childhood and their elementary school life had been interrupted many times during China's eight years of war with the Japanese and the subsequent four years of civil war with the Chinese Communists. In the same classroom with the Chinese mainland students were Taiwanese students who were born in Taiwan and who as small children had experienced, as had their parents and grandparents, an orderly and productive life under Japanese colonial rule. However, in World War

[1] Based on a Ph.D. thesis, "A Cross-Cultural Study in Taiwan Schools," Western Reserve University, to be published in 1958.

II, the Taiwanese youngsters personally experienced, as had the Chinese mainland students, the devastation caused by frequent bombings and strafings of all-out war. The Taiwanese children spent their elementary school years in the chaos of the postwar efforts to rehabilitate the war's damage to Taiwan.

The material presented here is part of a greater body of data obtained in the writer's cross-cultural study conducted in the Taiwan schools. American tests that seemed most appropriate were chosen, translated into Chinese, and administered in May, 1955, to approximately 1,500 11th-grade students in five representative cities on Taiwan. Mathematics, science, critical thinking, interest, and non-verbal intelligence tests were used in making this study. These two groups of students who were studying together in the 11th grade in 1955 had entered the seventh grade together in 1950 and therefore had been under similar school conditions for only five years of their lives at the time they were tested.

Standard textbooks are used for all subjects in the middle schools where the same standard academic course is offered to all middle school students throughout Taiwan. A survey of the table of contents of these standard mathematics and science textbooks showed that the same topics taught in American schools were being offered in the Taiwan schools. The mathematics and science tests of the Harry-Durost *Essential High School Content Battery* were chosen because this battery had been constructed after an exhaustive review had been made of representative instructional materials presented to high-school students throughout the United States. The American norms were obtained from the administration of the battery to a standardization group of 46,000 students in 35 states.

Table 1 presents the mathematics and science test results obtained in Taiwan. The end-of-year American academic-course norms for the mathematics and science tests are given in column (7) because the academic courses offered in the United States in these two fields are similar to the standard courses of the Taiwan middle schools.

In spite of their diverse background and early school interruptions, the difference in mean scores between the Taiwanese group of 765 students and the Chinese mainland group of 525 students is not statistically significant in mathematics. The differences in the mean scores in science of these two groups is significant at the .01 level.

An interesting observation in Table 1 is the fact that the boys excelled the girls in both mathematics and science. These results are consistent with those found in the United States in mathematics and science achievement tests. Sex differences are significant at the .01 level in both mathematics and science.

TABLE 1

Mathematics and Science Test Results for 1,290 Chinese Mainland and Taiwanese Students

Test (1)	Taiwanese (2)	Chinese Mainland (3)	Total Boys (4)	Total Girls (5)	Total Group (6)	U.S. Norms (7)
Mathematics						
Q_3	41.86	40.98	44.91	35.90	41.54	37.50
Median	34.44	33.98	37.23	30.84	34.21	29.50
Q_1	28.94	28.01	31.23	25.91	28.51	22.00
Mean	34.92	34.33	37.39	30.71	34.68	.....
Science						
Q_3	42.31	43.27	45.31	39.82	43.15	44.67
Median	37.05	39.53	40.29	34.79	38.03	37.33
Q_1	31.41	34.61	35.76	30.03	32.53	30.00
Mean	36.16	38.91	39.57	34.36	37.28	.....
Number	765	525	723	567	1,290	.....

In addition to the observations made concerning the differences in scores within the Taiwan group, an attempt is made here to equate the Taiwan and American standardization groups in *general* terms only as to grade level, type of curriculum in which the students were enrolled at the time of testing, and by the similarity of the courses in mathematics and science which the two standardization groups attended.

By way of interpretation of Table 1 concerning the differences between the Taiwan and American norms, it should be stated that the school day in Taiwan is a strenuous one. School is in session six days a week for 10 months of the year. Lesson preparation involving intense memorization of subject matter, frequent and difficult examinations, a nine-hour school day, and extra school activities combine to make the student's day a long and arduous one. It is not intended, however, that the American norms be compared with the Taiwan norms to indicate superiority of one nationality over another. The intention is rather to provide a standard by which the American reader can judge the level of mathematics and science achievement in the Taiwan schools and thereby to show the reader the potential reservoir of scientific ability existing in Taiwan today.

The students were given the Cattell *Culture-Free Intelligence Test*, Scale 3, Forms A and B. Scale 3 of this test was used because it is the most difficult of the three scales and is designed for "upper high school, college adults, and those already selected groups in which stiffer selection is needed." The *Culture-Free Intel-*

ligence Test is a non-verbal test and therefore no translation was involved. Table 2 is presented to provide additional evidence of the caliber of the Chinese mainland and Taiwanese students in the Taiwan schools.

TABLE 2

Mean Scores for 1,290 Taiwanese and Chinese Mainland Students on Culture-Free Intelligence Test, Scale 3, Form B, with Corresponding American I.Q. Values

Form B	14.0 Years			15.0 Years			16.0 Years And Over		
	Mean	N	I.Q.	Mean	N	I.Q.	Mean	N	I.Q.
Chinese Mainlander	33.50	2	146	29.04	27	117	27.37	496	106
Taiwanese	.....	..	.....	28.00	2	114	26.95	763	104
Total Boys	33.50	2	146	29.80	15	119	27.21	706	105
Total Girls	.....	..	.....	28.07	14	114	26.89	553	104
Total Group	33.50	2	146	28.97	29	117	27.11	1259	105

Note: The corresponding American I.Q. values for the mean raw scores of the Taiwan students in Table 2 are taken from Cattell's table of I.Q. values for Scale 3 in his manual of directions. The raw scores of 44% of the Taiwan students placed them above 110 I.Q. of Cattell's standardization group in the United States.

The I.Q.'s of the Taiwanese and the Chinese mainland students at age 16 are 104 and 106, respectively; this difference is statistically significant only at the .05 level. The fact that the difference in mean raw scores of the boys and the girls on this non-verbal intelligence test is not statistically significant tends to follow the same pattern discovered in the United States, where male superiority in mathematics and science is the rule while measured intelligence remains about the same for both sexes.

Population has outrun employment opportunities on Taiwan and at the same time urbanization has moved ahead faster than the creation of industrial employment. The problem of finding a job in Taiwan upon graduation from the senior middle schools or colleges has become an increasingly serious one. The number of civil servants employed by the Chinese National government reached a saturation point just about the time the group described above was tested in May, 1955. Although the regular government qualifying examinations were held, jobs could be provided for only a small number of successful candidates. Taiwan University alone had more than 800 graduates in June, 1955, but this total was greatly increased by the number of students graduating from the vocational schools and colleges as well as those graduating from the academic middle schools and academic colleges in engineering, law, and others. The skills, both intellectual as well as technical, of large numbers of these secondary school and college graduates are being used only partially or not at all.

Two Chinese-born nuclear scientists, whose research was done in the United States, were recently awarded the 1957 Nobel Prize in physics. They were the first Chinese ever to win this coveted award and thereby showed the capability of the Chinese to make valuable contributions to the scientific knowledge of the free world. The study described here has shown the results of administering American mathematics and science tests to 1,290 eleventh-grade Chinese students in Taiwan and has given a view of the potential pool of scientists that exists there. The contribution which these able Chinese mainland students and Taiwanese students are capable of making must be judged in light of the employment situation on Taiwan which does not permit the students to utilize fully their intellectual abilities.

Truly, this does present both a challenge and a solution to the United States and the other free world countries, for on Taiwan today there are mental resources available to offset some of the advantages that the Communist world claims to have in the numerical superiority of scientists. If this challenge is not accepted, available Chinese brainpower that could be put to work for the free world will dissipate itself in Taiwan on inferior tasks.

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Some Results of Eight Yearly Studies of TV[1]

By PAUL WITTY
Northwestern University

THE IMPACT of television in the daily lives of American boys and girls has led educators into a new field of research. The following data were obtained by the writer in studies made each year since 1950 of the reactions to TV of approximately 2,000 elementary and high-school pupils, their teachers, and their parents. The results have been reported yearly in *Elementary English*. In 1957, the study was limited to Evanston, Ill., and Kenosha County, Wis.

In 1949 and 1950, TV came to Evanston and the Chicago area. By May, 1950, 43% of our school children reported that they had access to TV. The percentages increased to 68 in 1951, 88 in 1952, and, in 1953, to 92. In 1955 and in 1956, 97% had TV sets at home. Studies by teachers in Chicago and investigations in Kenosha County and Evanston in 1957 yielded percentages of 96 and 97. Some children have two sets at home; a few have three sets (including color TV).

In 1950, many people believed that televiewing would be a passing fancy. That this prediction has not been realized may be seen from the studies which show that children now actually spend as much time or more with TV than they did during the period when TV offered them a new experience. In 1950, the elementary school pupils spent 21 hours each week with TV; in 1951, the average was 19 hours; in 1953, 23 hours. In 1955, the average was 24 hours per week, while in 1957 it was 20 hours for Evanston children and 23 for Kenosha County pupils. The average for high-school pupils was 14 hours in 1955 and 12 in 1957.

In 1950, the parents spent 24 hours on the average each week in televiewing, about 20 in 1957.

Teachers continue to spend less time with TV than do the children or their parents. In 1951 their average televiewing time was nine hours per week; in 1953, 1955, and 1957, 12 hours.

Favorite programs change, and year by year new programs become popular. In 1950, the children's favorites included cowboy and puppet shows such as *Hopalong Cassidy, Lone Ranger,* and *Howdy Doody*. The favorite comedian of that time, *Milton Berle,* was also high in the list of preferred programs. *Arthur Godfrey,* very well liked by adults, also was enjoyed by the children. *I Love Lucy* (a comedy presentation about family and home life) became the best liked program in 1952. This program continued in first place until 1955, when acclaim went to *Disneyland*. At the same time, adventure programs featuring animals, such as *Rin-Tin-Tin* and *Lassie,* also were extremely well liked. In 1956, *Disneyland* again held first rank, with *I Love Lucy* third. In 1957 *Disneyland* held first rank and the animated comedy entitled *Mickey Mouse Club* was second. Third in popularity was *I Love Lucy,* followed by *Lassie*. Additional popular presentations followed the themes of adventure, family life, and comedy depicted by the animated cartoon technique.

The parents studied from year to year have averaged approximately 20 hours per week televiewing. When TV was new, Evanston parents spent somewhat more time with TV than now. The Evanston group averaged 18 hours in 1957. Kenosha parents, on the other hand, spent 22 hours per week televiewing. The average for the two groups was 20 hours. The favorite programs of parents in 1957 included *I Love Lucy* and a musical presentation, *Lawrence Welk*. Following closely was *Perry Como's* variety show and a comedy of home life, *Father Knows Best*.

Only 25% of the teachers had TV sets in 1951. An increase in TV ownership gradually raised the percentage until, in 1957, it was 93. *What's My Line?* appeared as the first choice of teachers in 1951 and continued as a favorite in 1952. The teachers showed less enthusiasm for *I Love Lucy* than did their pupils and the parents during the years 1952-56. In 1957, the teachers gave first place to *Lawrence Welk,* but included other informative programs such as *Omnibus*. The variety program, *Perry Como,* held second place. High in the list was the favorite of the children, *Disneyland*.

[1] In its original form, this paper was presented to Section Q, American Association for the Advancement of Science, Indianapolis, Dec. 26, 1957.

Comparison of the programs best liked in 1951 with those in 1957 will disclose the limited and meager offerings of TV at first as compared with the more diversified and provocative presentations today.

How is TV affecting children's health? In our first studies, parents stated that, as a result of TV, children's vision was suffering and that they slept less, played less, and were somewhat more nervous and disturbed. Fewer and fewer parents now voice these complaints.

Our more recent investigations indicate that most elementary school children spend about the same amount of hours in sleep as did children before the advent of TV. And parents are increasingly directing and guiding children's televiewing to advantage. For example, some report that they are permitting older children to watch late TV shows—only on Friday and Saturday nights, however, in order that children may sleep later the next morning.

As for vision, the National Society for the Prevention of Blindness has stated that the eyes are not usually adversely affected in televiewing if the rules of proper seating, clear focussing of the set, and proper lighting of the room are observed. Some parents do not permit long, continuous periods of televiewing but insist that children vary this activity with more active pursuits. However, parents are increasingly devising TV schedules for the family. Certain programs are selected, sometimes by family agreement, with due consideration for other activities and interests in a total week's schedule.

Writers have asserted that children today tend to spend less time in outdoor play and sports and in creative activities and hobbies than they did in former years. This condition is sometimes attributed to the influence of TV. One investigator recently reported no difference in the personal and social adjustment between children who viewed TV very much and those who did little televiewing. Our recent studies show, too, that many children who are avid TV fans still find time to indulge in outdoor sports and activities, although our earlier studies revealed some reduction in hobbies and in outdoor activities.

Opinions differ on the relationship of televiewing to emotional problems and to undesirable attitudes and behavior. In a committee report to the American Medical Association, Dr. Elizabeth Avery stated that "reduction of creative activity and time spent in physical play tends to increase emotional problems among children." In testimonials before the Senate Subcommittee to Investigate Juvenile Delinquency, it was indicated that a relationship may exist between televiewing and juvenile delinquency. It was pointed out that the well-adjusted child may be unaffected by seeing violence and crime on TV, but the less well-adjusted child may be affected seriously. The opinion was expressed, too, that repeated exposure to crime and violence may blunt children's sensitivity to human suffering.

In our studies, both teachers and parents continue to report behavior and adjustment problems associated with TV: neglect of homework, mealtime disturbance, increased nervousness, fatigue, eyestrain, impoverishment of play, disinterest in school, and reduction in reading. But, according to present reports, the problems seem to be diminishing.

Teachers who collaborated in these investigations have studied children who spend extremely large amounts of time televiewing. Some were problem cases, but others were well-adjusted, successful students. In every case of a serious maladjustment, the teachers found other contributing factors, such as a poor home and an unfavorable environment. But teachers stressed their feeling that too many crime programs are being presented; and they deplored the character of many movies that children see on TV.

Clara Evans reported a study of the reactions of 40 kindergarten and 22 nursery school children to weekly programs for children. She found that a noticeable effect on these children was revealed in their vocabulary. But this effect might be good or bad "depending on the quality of the program." She concluded that, when properly guided, televiewing can become a most important educational tool.[2]

Tarbet reported a study of the televiewing habits of 1,500 sixth-graders within a 12-mile radius of Chapel Hill and concluded that "an average of 20 hours of viewing TV per week is not detrimental to pleasure reading or to academic grades."[3]

It has often been claimed that children are now reading less because their time is monopolized by TV. Parents and teachers included in our surveys continue to set forth their conviction that many children read less than they did before TV. But the number of these complaints has decreased.

In 1957, about 50% of the pupils stated that they read less; and 50%, more. From the results of our studies, it is clear that the average amount of reading has not been altered appreciably. However, there are some pupils who read less,

[2] C. Evans, *Elementary English*, 32: 541-542, Dec., 1955.
[3] D. G. Tarbet, *Clearing House*, 30: 485-487, April, 1956.

and this is a real problem to parents and teachers. Yet, the fact remains that many children are reading widely today—more widely than ever before.

When TV emerged as children's favorite leisure activity, there were ominous predictions that it would lower school attainment. The results of studies of grades in relation to the amount of time devoted weekly to TV are conflicting. Our own studies show little relationship between grades and the time spent televiewing. As one teacher remarked, "Good students tend to remain good, poor students stay poor."

On the question of whether TV helps or hinders school work, the children themselves are about equally divided. Those who think it helps mention its value in improving vocabulary and knowledge of history, current events and science, people at home and around the world, and books old and new. Our own studies suggest, too, that vocabularies are extended somewhat by TV. The teachers made lists of words children learned from TV. They pointed out that the definitions and pronunciations might be right or wrong, depending to a considerable degree upon the way the words are presented on TV. The greatest gains in vocabulary appeared in the primary pupils.

In our studies, excessive viewing of television seemed to be associated with somewhat lower academic attainment. For example, in one investigation, we divided the children into groups on the basis of standard educational tests. The average time devoted to TV by the upper fourth in academic attainment was 21 hours per week, while the average of the lower fourth was 26 hours. Although televiewing did not appear to influence educational attainment greatly, there were individuals who apparently were affected undesirably. But we should point out that other children probably were led to do better work in school because of interests awakened by TV.

Many children report that they learn much from TV about science, the lands and cultures of other peoples, and the satisfactions to be found in books. TV presents problems, it is true, but it also provides great opportunities for parents and teachers to promote the educational and avocational interests of boys and girls.

There has been a marked change in the attitude toward TV on the part of many parents and teachers. At first, large numbers were skeptical concerning any desirable outcome from TV. Typical of complaints were these: "TV is reducing our children to a race of spectators"; "life should be lived, not watched."

Today, more and more parents and teachers accept televiewing as a part of our design for living. They cite problems less frequently and indicate that many children appear to read more because of interests awakened by TV offerings. However, many also are concerned about the children who read less, as well as about the very large amount of leisure time consumed by TV and the neglect of other activities. It is certainly true that TV uses a great deal of our time. . . . "Last year in homes with television sets—three quarters of all the families in the country—more total time was spent watching television than in any other single activity except sleep."[4]

Despite the limitations of TV, it has many desirable features. The antidote to its undesirable aspects lies in a constructive program of guidance for children and young people. If too much time appears to be devoted to TV, other activities should be encouraged to insure a balanced and individually suitable pattern. Let us remember that TV is a problem mainly in homes where parents allow it to become and remain a problem. Let us cease to attribute to TV all misdemeanors in children and youth. Let us instead try to gain the greatest values from this appealing medium. There are some genuinely informative programs and occasionally an inspiring presentation or an offering of great beauty. There are unrealized opportunities for stimulating appreciation and for enhancing interests by a judicious use of TV. By guiding children to choose programs with greater discrimination and by associating this strong interest with other desirable activities, we may discover that TV can play a positive role in children's development and welfare.

[4] Special Report: "Television, the New Cyclops," *Business Week*, March 10, 1956, p. 77.

RECENT *Publications*

The following are 1958 editions, except where indicated otherwise

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(Continued on page 302)

RESEARCH

Prediction of Scholastic Success for a High Aptitude Sample[1]

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In 1956, the National Merit Scholarship Corporation, after a nation-wide screening program, granted four-year college scholarships to a group of 556 high-school seniors, National Merit Scholars. The present report is intended to provide a summary of the scholastic achievement of this talented group for their freshman year in college, 1956-57, and to determine the predictive validities of selection and background variables. For a complete description of this group in terms of their geographical distribution, scholastic ability, secondary school origin, and vocational goals, the reader is referred to previous reports.[2] The following sections summarize the college grades and related scholastic accomplishments of Merit Scholars, the predictive validities of the selection tests and high-school rank, and the relation of college grades to secondary school control and class size.

College grades and honors. For the freshman year the average male Scholar maintained an honor point ratio of 3.31, or a B+ average, with a standard deviation of .60. Female Scholars obtained a slightly higher HPR of 3.43, with a standard deviation of .51.[3] Student rank in freshman class provides a similar picture of high accomplishment. This record is presented in Table 1.

TABLE 1
Freshman Standing of Merit Scholars

Rank in Freshman Class	Normal Expectancy	Males Per Cent	Females Per Cent	Total Per Cent
First Quarter	25	80.5	85.7	81.9
Second Quarter	25	11.4	10.7	11.2
Third Quarter	25	5.5	3.6	5.0
Fourth Quarter	25	2.6	0.0	1.9
Total Percentage	100.0	100.0	100.0	100.0

Note: Rank in class was not available for 4.2 per cent of the Scholars. The inclusion of these unranked students would increase the percentages for the first and second quarter, since the unranked students generally have high HPR's.

In terms of class standing, 82% of this group are in the top quarter of their freshman class and 93% are in the top half of the class. Since, by definition, only 25% of a freshman class are in the top quarter, the percentage of Merit Scholars in this quarter is more than three times the normal expectancy.

Of the 555 Merit Scholars entering college, only seven (one per cent) left the National Merit Program during the freshman year. Of these seven, two resigned to pursue special training, two resigned because of psychological problems, one withdrew because of expressed dissatisfaction with college training, and only two (three-tenths of one per cent) were clear cases of academic failure (scholarship cancellation due to unsatisfactory academic progress). In general, the grade record and low attrition rate for this group is remarkable, since it was achieved largely in a group of colleges which have highly selected student bodies whose level of ability is generally above the national average.

The record of awards, prizes, and academic honors received by this group of freshmen provides a more concrete picture of their academic success. College officials report that 62% of the males and 68% of the females received one or more of the following kinds of recognition: inclusion on dean's lists, membership in special honor societies, special awards, or prizes given by various honor societies.

Validities of selection tests and high-school rank. The predictive validities of the Scholastic Qualifying Test (SQT), Scholastic Aptitude Test (SAT), and High School Rank (HSR) were determined by three separate analyses of the

[1] This study was partially supported by research grants from the National Science Foundation and the Old Dominion Foundation.

[2] J. L. Holland and R. C. Stalnaker, "A Descriptive Study of Talented High School Seniors: National Merit Scholars," *Bulletin of the National Association of Secondary-School Principals*, in press; *First annual report* (Evanston: National Merit Scholarship Corporation, 1956).

[3] All grades were converted by an honor point ratio formula where A=4, B=3, C=2, D=1, F=0; grades were multiplied by credits per course and divided by total credits carried.

data: for the total samples of male and female scholars, college grades (HPR) were correlated with SQT total, SAT-Verbal, SAT-Math, SAT-Total, SAT (2V+M), and High School Rank (HSR); the same correlations were computed for each of the eight colleges which have 14 or more Merit Scholars in attendance; and multiple correlations were computed for an estimate of the more useful combinations of predictors. The results of these analyses are shown in Tables 2, 3, and 4.

TABLE 2
The Relation of College Grades to the SQT, SAT, and High School Rank for 541 Merit Scholars Attending 159 Colleges and Universities

	N	SQT Total	SAT Verbal	SAT Math	SAT Total	SAT (2V+M)	HSR*
Males							
Science	284	.053	.098*	.171**	.191**	.167**	.107*
Non-Science	110	−.015	.036	−.058	−.027	−.004	.104
Total	394	.033	.078	.098*	.125**	.116**	.108**
Females							
Science	71	−.031	.002	.103	.082	.059	.219*
Non-Science	76	.082	.099	−.037	.011	.028	−.073
Total	147	.015	.014	.058	.055	.044	.083

Note: Of 535 Merit Scholars who entered college in 1956, seven failed to complete the freshman year and are excluded from this table. The records for seven additional scholars were not available at the time of this analysis. The omission of these 14 cases may have lowered the correlations in Table 2, although probably not to a significant degree.

* Point biserial correlations were used in this column because of the extreme skewness of HSR distributions. Remaining coefficients are Pearson product moment coefficients.

* Significant at .05 level. One-tailed test.

** Significant at .01 level. One-tailed test.

The low correlations in Table 2 probably result from the inclusion of diverse institutions which differ widely in grading practices and range of competition and from the restricted range of talent among scholars themselves[4] For example, more than half of the Scholars have HSR's greater than 99.0 and SAT scores of more than 700. Of the variables used, high-school rank appears to be the best over-all predictor of scholastic success, although of almost equal value are the SAT mathematics factor, the total score, and the selection formula, 2V+M. High-school rank has three significant correlations with college grades: for males, r equals .107 for science majors and .108 for the total male sample. For females, r equals .219 for science majors. The latter result is encouraging since Thistlethwaite[5], in a study of selection board decisions, finds that high-school rank "differentiated most clearly between selected scholars and rejected candidates," whereas other variables, including principal's prediction of college rank, SAT (2V+M), and similar criteria, resulted in less efficient discriminations. In other words, the major selection bias of the board is supported by the results of the present study. The insignificant correlations for the SQT may result partly because it was administered in a great range of secondary school settings, whereas the SAT was given at a relatively limited number of centers by more experienced test administrators. The SQT results may also be a function of its short length relative to the SAT. Note, however, that in Table 3 the SQT does predict college grades about as well as the SAT.

Since the verbal and math sections of the SAT would be expected to have differential predictive validities for science and for non-science majors, male and female samples were dichotomized in this fashion and correlations computed. This more homogeneous grouping resulted in generally higher correlations in the predicted direction. The math section of the SAT predicts grades more effectively for science majors whereas the verbal section yields more efficient predictions for non-science majors.

Table 3 summarizes the correlations between college grades, test variables, and HSR for colleges with 14 or more male Merit Scholars.[6] Correlations range from −.14 to .72 with median of .34. These correlations are generally higher than those in Table 2, presumably because of a number of favorable conditions, including a more reliable criterion and perhaps a relatively high level of scholastic motivation among those student bodies which tend to push students near the limit of their capacity. Under maximal academic motivation, grades would be expected to be more closely related to aptitude scores than when motivation is less than maximal. Furthermore, note that the correlations for the

[4] The correlations in a more complete or heterogeneouc population have been estimated by the following formula and by assuming a standard deviation of 80 for the heterogeneous population:

$$\frac{S.D._{\tau_u}}{S.D._{\tau_w}} = \frac{\text{Square root of } (1-r^2_{x_w y_w})}{\text{Square root of } (1-r^2_{x_u y_u})}$$

The standard deviations for the male sample for SAT-Verbal and Mathematics are 42.6 and 51.4, respectively. For the SAT verbal factor, the r of .078 in Table 2 yields a corrected correlation of .85 for a more heterogeneous sample. Similarly, the r of .098 for the mathematics factor correlation becomes .77. These approximations suggest that the SAT has substantial validity for predicting college grades in a more heterogeneous sample.

[5] D. L. Thistlethwaite, Memo. Report No. 2. Research and Studies (Evanston: National Merit Scholarship Corporation, 1957).

[6] Only one institution (Radcliffe) had 14 or more female Scholars in attendance. All correlations of predictor variables with grades are insignificant.

TABLE 3
Relation of College Grades to SQT, SAT, and High School Rank for Colleges with 14 or More Merit Scholars in Attendance

	N	SQT	SAT-V	SAT-M	SAT-T	SAT(2V + M)	HSR[a]
Calif. Inst. Tech.	18	.51*	.24	.49*	.48*	.42*	.11
Mass. Inst. Tech.	35	.42**	.34*	.46**	.52**	.49**	−.08
Rice Inst.	14	.41	.27	.45	.72**	.60*	.29
Cornell	15	.01	.28	.70**	.67*	.45	.07
Harvard	56	.07	.09	−.01	.09	.08	.25*
Princeton	16	.25	.23	.39	.40	.33	.25
Yale	16	.43	.51*	.11	.27	.42	.00

[a] Phi coefficients; remaining coefficients are Spearman rank order coefficients corrected for tied ranks.
* Significant at .05 level. One-tailed test.
** Significant at .01 level. One-tailed test.

colleges which are characterized by science and engineering curricula (California Institute of Technology, Massachusetts Institute of Technology, and Rice) are generally higher than correlations for those institutions with more diverse programs (Cornell, Harvard, Princeton, and Yale), that generally the math factor is a better predictor among the former institutions, and the verbal and math factors are of approximately equal value among the latter. These institutional differences may also reflect differences in selection methods, in accordance with the rationale outlined previously by Fricke.[7] It is of interest, too, that despite a very narrow range of scholastic aptitude, sizeable correlations are obtained, a finding reported in previous College Entrance Examination Board studies.[8] The same report reveals the differential values of the math and verbal factors in prediction for engineering and science institutions versus other institutions.

TABLE 4
Correlational Matrix for SAT, HSR, and HPR

	Total Sample (N=394)			Science Sample (N=284)		
	HPR	Verbal	Math	HPR	Verbal	Math
Verbal (SAT)	.078			.098		
Math (SAT)	.098	.016		.171	.027	
HSR	.108	.004	.119	.107	.012	.147

TABLE 5
Single Order and Multiple Correlations of SAT Variables, High School Rank and Honor Point Ratio (Males)

	Total Sample	Science Sample
	HPR	HPR
Single Order Correlations		
HSR	.108	.107
Verbal (SAT)	.078	.098
Mathematics (SAT)	.098	.171
Multiple Correlations		
Verbal, HSR	.133	.140
Mathematics, HSR	.138	.189
Verbal, Mathematics	.120	.195
Verbal, Mathematics, HSR	.158	.211

Table 4 contains the correlational matrix for SAT, HSR, and HPR from which multiple correlations were derived for the total male sample and for the male science sample.[9] Table 5 contains the multiple correlations for selection variables and college grades (HPR). The correlations obtained for the total and the science samples illustrate the value of limiting prediction to more homogeneous groups. Generally, the correlations, single order and multiple, are higher for the male science sample and lower for the total sample. The gain in predictive efficiency secured through multiple correlations is about equal to the gain secured through more homogeneous grouping—that is, the highest multiple R for the total sample is .158, which represents an increase of .05 over the highest single order correlation, whereas homogeneous grouping results in a single order correlation of .171 or a gain of .06.

Grades and high-school class size and control. Grades (HPR) were compared with the size of high-school senior class for both sexes. No significant relationships were found between these variables. The average college grades (HPR) for students from parochial, private, and public high schools also were compared. No statistically significant differences occurred between the students trained in these diverse secondary schools. In short, there is no evidence in the present data that school size or type of institutional control is related to academic achievement in the college freshman year.

For males, the results clearly suggest that HSR, SQT, and SAT possess low but significant validity for predicting freshman college grades for the total sample and substantial validity for samples within specific colleges or more homogeneous groups. A comparison of Tables 2, 3, and 5 clearly suggests that gains in predictive efficiency can be obtained by establishing dif-

[7] B. G. Fricke, *College and University*, Fall, 1956, pp. 34-52.
[8] H. S. Dyer and R. G. King, "College Board Scores No. 2" (Princeton: College Entrance Examination Board, 1955).
[9] Multiple R's were not obtained from the total female sample or from the male non-science sample, since these samples contain only one significant correlation with grades, high-school rank in the case of females.

ferential predictive equations for students with science and non-science goals, and that further gains might be obtained by developing equations for individual colleges. These tables make clear the predictive superiority of the mathematics factor over the verbal factor for the science group, a finding consistent with previous research.[10]

For females, the results are less clear. Although HSR appears to be a superior predictor, the limited size of the sample makes the relative contribution of the SAT, SQT, and HSR problematical. The accumulation of another female sample might provide a more adequate opportunity for evaluating the contributions of these variables.

In conclusion, the SAT and HSR have useful validities for predicting freshman grades for a high aptitude sample. More efficient predictions may be obtained by dividing the total sample into more homogeneous sub-groups, by multiple correlation, and by predicting within rather than across colleges. The effectiveness of the SAT and HSR as selective variables is suggested by the outstanding academic record achieved by Merit Scholars in their first year of college.

[10] Dyer and King, *op. cit.*

SPECIAL CONFERENCE REPORTS

Higher Education: Strengthening Quality in the Satellite Age

EXCELLENCE in education was the goal set by the 13th National Conference on Higher Education of the Association for Higher Education, NEA, at its meeting in Chicago, March 2-5, 1958, but the term "excellence" was given an interpretation which was distinctively American. It varied sharply from the U.S.S.R. definition and stressed democratic rather than Soviet ideals. Excellence in all phases of life was called for by more than 1,000 college presidents, deans, department heads, and professors from 48 states and over 20 foreign countries. As John W. Gardner, president, Carnegie Foundation for the Advancement of Teaching, said, "We must scorn shoddiness. An excellent plumber is infinitely more admirable than an incompetent philosopher. The society which scorns excellence in plumbing because plumbing is a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water."

The conference members approved a resolution to strengthen the program in the teaching of science, mathematics, and engineering, but only as a part of a general strengthening of the other academic areas. To stress the scientific potential in education at the expense of the total curriculum was, in the thinking of the conference, to weaken the liberal tradition of democracy and to take a step in the direction of regimentation and imbalance in education. The American way is not to siphon off into the areas of science and mathematics the top brain potential of the United States, giving them high-quality education in these areas and then to provide only a meager offering to the residue—the future scholar in the social sciences and arts, the top administrator, the lawyer, or doctor. The American way is to give the best possible education to each child up to his maximum capacity. This ideal, which has been one of the strengths in the history of our country, should be maintained; the urgency of the present situation, brought about by increased enrollments and world conditions, merely stresses the need to stretch that "maximum capacity" to its utmost for all our youth, regardless of race, sex, creed, or color.

Highlighted at the conference were the critical issues of the day: who shall go to college; how shall the gifted be identified regardless of economic or racial barriers; should special training be given to our talented youth and what should the nature of this training be; how can we give adequate compensation to our college faculties, provide proper physical facilities, and make use of new techniques such as television.

Better co-ordination between high school and college—the lifting of what Charles R. Keller of Williams College called "the sheepskin curtain" now separating the two institutions—was urged. Exchange of information and ideas would bring more understanding, preventing confusion of

aims and some of the present unfortunate recriminations, and would lead to better articulation between secondary and higher education. Much time and talent of our youngsters can be saved by the acceleration of talented students and by understanding guidance of those needing post-high-school training other than college. Better counselors—and more counselors—are needed in high schools.

To accomplish these aims, among others, the conference strongly supported the current NEA legislative program. Improved standards, as Max Lerner pointed out, can best be established through state and national professional education associations. The conference resolved that state and local governments make maximum efforts, through public funds, to provide and maintain diversified facilities; colleges and universities continue to encourage substantial gifts from private donors and corporations; Federal funds be provided for not less than 80,000 four-year scholarships within four years; Federal funds be provided for at least 5,000 graduate fellowships next year; and that students be left completely free to choose their own subject-matter fields of study. Vastly increased financial support is also needed for all phases of college and school operation. There must be a "new look" in educational finance if both quantity and quality of education are to be increased. Max Lerner told the conference that the nation has long labored under what he called the fallacy of localism. "Local groups can make just as many mistakes as state and national bodies. Most especially, local communities have fallen down on financing their schools properly."

Perhaps the crux of the whole situation lies in selection of the faculty of our colleges and universities. It is a truism that the strength of an educational institution lies in the strength of its teachers. No problem facing higher education is more important than the increase, improvement, and retention of a good faculty. Charles Cole of Columbia University urged that less money be spent on athletic scholarships and more for faculty salaries. Better preparation was urged for those entering the field of higher education. Delegates agreed that the road to the higher degrees should not be made easier but that the goal to be attained should be twofold: the development of persons who will be both good scholars *and* good teachers.

PAUL G. BULGER
Provost

Teachers College,
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The AASA Conventions

THE LAST of three regional[1] American Association of School Administrators conventions closed April 1 in Cleveland, Ohio, with outgoing Pres. Philip J. Hickey summing up nationwide administrative opinion this way: "Just as there are all kinds of shoe sizes, so are there all kinds of children whose rate of learning and achievement comes in a variety of speeds. The American brand of education must tailor-make its schools—on all levels—to fit the needs and speeds of these young people."

Individual school systems, said Hickey, must "play by ear" the types of courses they offer. In many cases this means tuning in to the demands of the local community and turning a deaf ear to the louder and more powerful din of critics who have captured the fickle fancy of some communication media.

It was clear that administrators, as a national group, differed on some points but held their ground on key issues. A refusal to go down on the mat under a load of false impressions plus serious consideration of constructive criticism marked the final conclusions in St. Louis, San Francisco, and Cleveland.

Keynoting all three regional meetings was James B. Conant, president emeritus of Harvard University and former U.S. Ambassador to the Federal Republic of Germany. Calling the school superintendent the "educational statesman of today," Dr. Conant urged that able students be so challenged that they would be doing 15 to 20 hours of significant homework each week. The academically talented student, said Dr. Conant, ought to be studying five solid subjects in each of the four high-school years. In the typical, large, comprehensive high school, 15-20% of the students fall in the academically talented category, Dr. Conant said.

A significant warning to the public, as well as to educators, was sounded by members of the AASA Commission on School District Reorganization in a series of press conferences held during each convention. At a time when citizens are making the greatest demands on the schools, reporters were told, approximately one-half of all high-school students are in schools too small to offer a comprehensive program.

Blamed for thwarting efforts to improve the schools were "outmoded, inefficient, weak" school districts, which perpetuate "meager, barren, educational programs." Commission members agreed that a school district should be large enough to employ at least 40 teachers and enroll 1,200 pupils in grades one through 12.

The main thread running through all three conventions—that which the administrators labeled essential to raising educational standards—was a heavier responsibility by the Federal government for financing. According to Executive Secretary Arthur Corey, California Teachers Association, in San Francisco, "the most fundamental shortage in public education in America is money shortage. . . . Education, like national defense, is going to cost more if it is to be good enough to meet our needs. Unless we are willing to take a new and daring look at this problem and achieve a major breakthrough in our attitudes in school finance . . . this situation promises to rapidly become even more critical." Inseparable from this issue were two others, curriculum and personnel.

Highlighting the first regional meeting in St. Louis, Feb. 22-25, were the following:

1. Marion B. Folsom, Secretary of Health, Education, and Welfare, who warned that the struggle for better schools is not a "push-button war" to be won by any single act. Rather, he said, it demands a larger portion of America's resources—dollars, time, attention, effort.

2. Robert J. Havighurst, professor of education, University of Chicago, who said that relative to its youth population, the United States is out-producing Russia in scientists and engineers.[2]

3. Sen. Prescott Bush (R-Conn.), who termed Congress' failure to pass a school construction bill in 1957 a reflection of the "lethargy of a citizenry doped by tranquillizer pills of prolonged material prosperity."

San Francisco delegates heard, March 8-11, the following:

1. Benjamin C. Willis, general superintendent of Chicago Schools, who said that "a big pressure upon the schools of the nation is scapegoating of education and the irresponsible criticism of our schools fed by self interest and set upon by the distortions of fact."

2. Sen. Frank Church (D-Idaho), who urged a reappraisal of "some of the tenets basic to American education today."

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[1] Attendance figures for the three regionals were as follows: St. Louis—8,000; San Francisco—4,500; Cleveland—8,000.

[2] Ed. Note: *See* R. J. Havighurst, "Is Russia Really Out-Producing Us in Scientists?" SCHOOL AND SOCIETY, April 26, 1958.

Among the general session speakers widely quoted by delegates in Cleveland, March 29-April 1, were Gov. G. Mennen Williams of Michigan; Chester Bowles, former Ambassador to India and former governor of Connecticut; Rabbi Abba Hillel Silver, former president of the Central Conference of American Rabbis and for the past 40 years spiritual leader of the Temple in Cleveland; and Herold C. Hunt, Charles W. Eliot Professor of Education, Harvard University.

Gov. Williams called for a national policy which would give education the assistance it needs now and which maintains an economic system capable of providing the wealth to pay the bill. The Federal contribution to education must be "raised drastically and immediately," he said. In a plea for a strengthened liberal education, Rabbi Silver said, "It would be a great loss to our people and to American civilization if our present discontent should catapult our entire educational system in an all-out technological direction . . . and degrade the importance of what we used to call liberal education."

Of the resolutions passed by all three regionals, perhaps the most controversial was one on the extended school year. Declaring that there is more to teach and more to learn than can be accomplished with high quality in the present time allotment, the resolution recommends an extended school year but rejects the four quarter system. Another resolution warns against attaching merit pay to invalid and unreliable evaluations.

MYRTLE BONN

National Education Association
Washington, D. C.

EVENTS

Legislative Follies and the Schools

EDUCATION is a field where one man's opinion is as good as the next man's, if not better. Few want to subject themselves to the discipline of ascertaining what is fact and separating it from figments of imagination. The professional in education is more often than not looked upon by intellectuals and lesser individuals with suspicion when he is not regarded with scorn.

The passing on March 21, 1958, of a bill by the New York State Assembly to abolish the junior high schools of New York City is a case in point of the chaos that exists in educational policy-making. The bill passed by a vote of 117 to 29, but it died in the State Senate. With the exception of the High School Teachers Association which supported the bill for no visibly defensive reason, educational and parents' organizations opposed this legislation.

During the same month, a California assemblyman introduced a bill which would compel by law the teaching of science to elementary pupils; an increase in the number of hours devoted to the three R's; and instruction in English, science, and in mathematics to high-school pupils. This contribution to educational statesmanship was repudiated, on account of its mandatory features, by the California Teachers Association.

Granted that junior high schools are not perfect and that it is necessary to learn particular subject matter, the question is whether our lawmakers are going about reform in the right way. They are, in effect, not only laying down policy but also specifying details, thus leaving little to the judgment of the men who have been trained to administer the schools and to teach in them. What is to prevent the legislators from continuing their merry way to run the schools from the state capitols? The fact that legislatures have passed laws of all kinds regarding education is no reason for supposing that they always have acted wisely. To act in the face of informed experience in education is to help undermine the foundations of scholastic success.

State legislatures, in whose hands the control and welfare of the schools lie, should weigh every action on education, as on every other specialized area, with great caution. Let them not listen to irresponsible and half-baked proposals. If the solons of the state law-making bodies are genuinely interested in public welfare, they should resist the frequent pressures in behalf of or in opposition to this or that educational proposal and insist on full facts and impartial opinions.

There is much speculation on what ails the American school. The educational malaise can be aggravated by hasty and ill-conceived laws. The times call for reflection and restraint, rather than rashness.

—W. W. B.

NATIONAL SURVEY OF SCIENCE TEACHING

A NATION-WIDE SURVEY of science and mathematics teaching in public high schools has been started by the U. S. Office of Education to provide answers to such questions as these: How much time is given to the teaching of certain topics in mathematics and science? Are adequate facilities and equipment available? What are the main teaching methods? How

heavy is the teaching load of science and mathematics instructors? What are the major teaching problems? How are science and mathematics teachers getting along financially? How many more teachers will be needed in the near future?

A report of the study is expected to be completed late this year or early in 1959. Ten national agencies and organizations co-operated with the Office of Education in planning the survey in which about 1,500 high schools have been asked to participate.

Lawrence G. Derthick, U. S. Commissioner of Education, said three other basic studies of this nature will be made. These will deal with science and mathematics instruction in public junior high schools, in public elementary schools, and in teacher training institutions. Studies of science and mathematics teaching in all four types of schools will be repeated at intervals.

The project is under the direction of two Office of Education specialists: Ellsworth S. Obourn (science) and Kenneth E. Brown (mathematics). Agencies and organizations co-operating are: National Academy of Science, National Research Council, National Science Foundation, President's Committee for the Development of Scientists and Engineers, American Association for Advancement of Science, National Science Teachers Association, National Council of Teachers of Mathematics, National Association for Research in Science Teaching, Association of Chief State School Officers, and National Association of Secondary-School Principals.

SEX EDUCATION FOR ADULTS

SEX EDUCATION FOR ADULTS "is as much or more needed than sex education for children and youth," stated Prof. Lester Kirkendall, Oregon State College, at a Conference on the Adolescent and the Family at the University of Illinois. The conference was presented by the Illinois Council of Family Relations, and the University of Illinois departments of home economics and sociology and was conducted by the university's Division of University Extension. "Until adults can gain a perspective, and an insight which lessens their fearfulness and hesitancy in free discussion, real assistance to youth will be impossible," Prof. Kirkendall declared. He said teachers and parents must create in young people loyalty to a high set of moral values.

A specialist in family life education, Prof. Kirkendall based his talk on a series of studies on the sex education of youth and parents. Some of his findings were:

"Sexual behavior is conditioned more sharply by the over-all personal adjustment of the individual than by the factual information he has, or does not have.

"We have attempted—and largely succeeded in our thinking—to isolate sex from all other phases of living. We have narrowed it down to a physical act and a physical relationship. In actuality, it does not function in this manner. We must recognize that it pervades or influences many aspects of living, and discuss it in its many relationships. Only as this is done will perspective be gained, and the present over-emphasis on sex be dispelled."

The freedom to talk about sex in casual and joking terms has grown considerably in the last decade, but an awareness of what constitutes a responsible use of sex has not developed as rapidly. "Rather than attempting to prescribe a particular course of action, we need first to build loyalty to a set of values. We need to be concerned with integrity, sincerity, and a genuine concern for others. We need to build the kind of relationships which are based upon trust and confidence.

"Adolescents are often trying to satisfy many needs or to accomplish certain non-sexual objects through the use of sex. The motives underlying sexual behavior are as varied and as complex as the motives underlying any other form of behavior.

"One will never be able to understand sexual behavior if he regards the desire for physical satisfaction as the only or even as the prime motivating factor."

EMPLOYMENT OUTLOOK FOR ELEMENTARY AND SECONDARY SCHOOL TEACHERS

TENS OF THOUSANDS of new elementary and secondary school teachers will be needed annually in the late 1950's and the early 1960's, according to information presented in the 1957 edition of the "Occupational Outlook Handbook," published by the U. S. Department of Labor's Bureau of Labor Statistics. Teaching is the largest of all the professions, with well over a million men and women employed as classroom teachers and several thousand others as principals and supervisors. No other profession offers so many employment opportunities to women. In 1955-56, women made up more than 85% of the elementary school teachers and about half of the junior and senior high-school teachers.

The shortage of elementary school teachers and of secondary school teachers in certain subject fields which existed in 1956 is likely to continue into the 1960's. As elementary and high-school enrollments increase, opportunities for school teachers will expand rapidly, since the number of teachers needed by the nation's schools depends chiefly on the number of pupils enrolled. Enrollment, in turn, depends to a great extent on the size of the school-age population. Owing to the high birthrates since World War II, enrollments in kindergarten and grades 1 through 8 will continue to rise in the near future. By the end of the 1950 decade, high schools will be feeling the impact of the high birthrates. In order to staff the new classrooms that must be provided for the rising number of students, many additional teachers will be needed each year. Moreover, still greater numbers will be required to replace those who leave the profession.

All states require every teacher in the public schools to hold a certificate. The amount of education required for certification differs considerably from state to state, but there is a steady trend toward uniform educational standards. The usual educational requirement for a certificate in the majority of the states is a bachelor's degree or its equivalent. The prospective teacher should find out about the exact requirements of the area in which he plans to work by writing to the state department of education or to the superintendents of local systems.

Inexperienced teachers often start out in rural schools or small-town systems. Opportunities for advancement may come through annual salary increases or by promotion to a supervisory, administrative, or specialized position. At least one year of professional education beyond the first college degree and several years of successful classroom teaching experience are required for many administrative or supervisory positions.

The estimated average annual salary for all classroom teachers in elementary schools was $3,800 in 1955-56 and $4,350 for those in secondary schools. Teachers' salaries are usually lower in rural schools than in large cities, where educational requirements are likely to be higher. Most schools are in session about nine months a year. Teachers, therefore, have a long vacation period during which they often take summer courses to help them obtain advancement and salary increases.

Additional information on the employment outlook for elementary and secondary school teachers and similar information for college teachers are contained in the chapter on these occupations in the "Occupational Outlook Handbook." Separate reprints of this chapter—in the form of a nine-page illustrated bulletin, "Employment Outlook in Teaching"—are also available.

ENGINEERING ENROLLMENT IN 1957

FOLLOWING is a summary of the principal findings of the 1957 annual survey of engineering enrollments and degrees in colleges which have one or more curricula accredited by the Engineers' Council for Professional Development. The survey, covering 152 such colleges in the United States and its possessions, was made by the U. S. Office of Education in co-operation with ASEE. The report is by Sidney J. Armore, chief, Statistical Services Section, Research and Statistical Services Branch, U.S. Office of Education, and Dr. Henry H. Armsby, chief, Engineering Education, Division of Higher Education.

1. Total engineering enrollment in the United States and its outlying parts in institutions accredited by ECPD reached an all-time high of 257,777 students in the fall of 1957. This represented a 5.5% rise over the previous peak of 244,390 students reported in 1947.

2. Engineering enrollment has shown year-to-year increases since 1951.

3. In the fall of 1957, total male engineering students in ECPD-accredited institutions made up 12.8% of total male degree-credit enrollment, compared with 12.5% a year earlier.

4. The enrollment of 67,071 freshmen in the fall of 1957 was 1.0% higher than last year. All other classes of enrollment in ECPD-accredited institutions, except sophomores, also showed increases.

5. Part-time and evening undergraduate engineering enrollment in the fall of 1957, totaling 30,458 students, was 17.1% above the year before.

6. Enrollment for the master's degree in the fall of 1957 in ECPD-accredited institutions increased 7.6% from the year before.

7. Enrollment for the doctor's degree in the fall of 1957 in ECPD-accredited institutions (4,180 students) increased a substantial 22.9% from the year before.

8. Evening student enrollment for the doctor's degree in ECPD-accredited institutions in the fall of 1957 (690 students) increased very substantially: 30.7% from the year before.

9. During the 1956-57 academic year, 27,748 first-level engineering degrees were awarded by ECPD-accredited institutions—a noteworthy increase of 17.8% from the year before.

10. First-level degrees in engineering awarded during 1956-57 constituted 8.0% of the total first-level degrees (estimated), a higher percentage than the 7.6% observed for 1955-56.

11. A total of 5,203 master's degrees in engineering was granted by ECPD-accredited institutions—an 11.2% increase from the year before.

12. ECPD-accredited institutions granted a total of 596 doctor's degrees in engineering in 1956-57—2.3% fewer than the year before.

13. During the 1956-57 academic year, the highest percentage of engineering degrees awarded by ECPD-accredited institutions for first-level, master's, and post-graduate pre-doctoral degrees was in the field of electrical engineering. For the doctor's, the highest percentage of degrees awarded was in chemical engineering.

A companion report including 69 institutions accredited as a whole by state or regional accrediting associations but which do not have curricula accredited by the Engineers' Council for Professional Development will be published as Circular 516, "Engineering Enrollments and Degrees, 1957," of the U.S. Department of Health, Education, and Welfare Office of Education.

ORIENTAL STUDIES AT COLUMBIA

EXPANSION of Columbia College's pioneering, 10-year-old undergraduate Oriental Studies Program is under way not only to increase Columbia's services to her own students, but also to further Oriental studies in other schools. The five-year expansion plan involves offering sections of Columbia's Oriental civilization and humanities courses in Barnard College, establishing an internship program at Columbia College for teachers from other schools, and encouraging the translation and publication of Oriental classics. It will be aided by a grant of $185,000 from the Carnegie Corporation of New York.

Five objectives of the expanded program were outlined in a report by William Theodore de Bary, associate professor of Chinese and Japanese and formulator and director of the current program:

1. Augmentation of the college's Oriental Studies Program teaching staff in response to steadily increasing student demand for the courses and to provide for extension of the program to Barnard College. Barnard College, the liberal arts college for women, is an affiliate of Columbia University;

2. Establishment of an internship program for teachers (or prospective teachers) of other colleges that would enable them to spend a year at Columbia College observing and participating in the Oriental Studies Program;

3. Arrangement of an annual conference for representatives of other colleges attempting or desirous of undertaking an Oriental studies program;

4. Embarkation on a translation program designed to increase the number of Oriental classics available in modern English for use in the college's course in Oriental humanities or in "great books" courses elsewhere, whether in undergraduate or adult education; and

5. Preparation of a guide to the great books of the East to serve as a teaching aid and reference guide for any course or study group in the United States that undertakes the reading and discussion of these classics.

Oriental Civilization 35-36 is an introduction to the history and culture of Oriental societies designed specifically for undergraduates. The aim of the course is to provide an understanding of the most important factors in the contemporary life of the peoples of China, India, and Japan, together with an appraisal of their role in the world today.

Dr. de Bary stated that the objective of the original Oriental Studies Program in Columbia College, organized in 1949 with the help of an earlier Carnegie Corporation grant, "has been to develop general education courses, designed especially for undergraduates, in the civilizations of China, Japan, India and Pakistan, as well as in the Great Books of these civilizations.

"Since the inauguration of Columbia's program ten years ago, an increasing number of colleges and universities throughout the country has been establishing similar courses for the introduction of Asian studies to the undergraduate curriculum. An important limiting factor in the extension of such work has been the unavailability of texts providing a suitable general introduction to these civilizations, and especially to their intellectual and religious traditions. To meet this need, the Columbia program has prepared a series of course readings, the first of which was released in May by Columbia University Press under the series title, *Introduction to Oriental Civilizations*, and the individual title, *Sources of the Japanese Tradition*."

RECRUITING SCIENCE AND MATHEMATICS TEACHERS

STEPS TO RECRUIT and train more mathematics and science teachers are now being undertaken by the municipal colleges of New York City—City, Hunter, Brooklyn, and Queens Colleges. In making the announcement, Dr. Harry N. Rivlin, dean, Division of Teacher Education, Board of Higher Education, called the new measures, "a many-sided approach to a many-sided problem." The colleges graduate more than 2,000 prospective teachers each year, but greater numbers of science and mathematics teachers are needed to meet the crucial shortage in that area.

The colleges will provide new courses, modify existing programs, and waive tuition fees for graduate students admitted to them. The emergency measures are made possible by the aid of state funds. The objectives are to encourage more mathematics and science students to enter teaching, to provide immediate help for teachers who are assigned to science and mathematics teaching for which they are not fully prepared, and to recruit and prepare liberal arts and science graduates for teaching.

Under the new program, City College this semester is conducting a pilot, tuition-free course for 22 junior high-school mathematics teachers who need more training in the basic concepts and procedures of the field. Other special refresher courses for science and mathematics teachers in the junior and senior high schools will be developed on the basis of experience with the experimental group.

The colleges will waive fees for graduates who study for a master's degree in the teaching of science and mathematics even though they have a master's degree in another field. While fifth-year programs in teacher education are free at the four municipal colleges, any additional courses have required fees heretofore. The emergency plan will go into effect in the summer session of 1958 and continue through the summer of 1960. If the teachers need basic undergraduate courses in science and mathematics as a part of their preparation, the courses also will be available tuition-free. The action is taken to encourage teachers who wish to shift from teaching other subjects or from teaching in the elementary grades. Similarly, the colleges hope to recruit men and women with experience in other scientific occupations such as research, engineering, and pharmacy. In addition, the colleges are planning summer workshops in science and mathematics for fully qualified high-school and elementary school teachers who want to keep up to date in these rapidly advancing fields.

NEW COURSES AT AMHERST

THE AMHERST COLLEGE faculty has approved two significant innovations in its course offerings for next year. The faculty, which already has a committee reviewing the entire college curriculum, approved the introduction of a senior colloquium in "great books" not covered in other courses and a program of independent study offered by the psychology department. Both are considered experiments.

The colloquium, to be taught by Professors John A. Moore (classics) and Joseph Epstein (philosophy) will be limited to 12 seniors. Each week a work will be read and then discussed at two-and-half-hour meetings at which both instructors will be present. The books will have no necessary connection. The course is designed to meet the needs of students who are interested in the reading of serious works but who, in their other courses, may have had little chance for discussing such works.

The independent study program offered by the psychology department lists some 21 subcourses. Students electing the course may work in any one of those areas. Although each subcourse is under the direction of a particular instructor, students will work on their own. During the middle of the semester, a student will be given an examination on his reading and will spend the balance of the semester writing a paper dealing with some aspect of the material covered. Among the choices open to undergraduates: "Theories of Personality," "Social Stratification and the Individual," "Psychosomatic Theory and Research," and "Learning Theory and Educational Practices."

The psychology course is listed in addition to Amherst's Independent Reading Course in which a student may do independent reading in any field, provided he has the approval and supervision of a member of the faculty. The Independent Reading Course and the new psychology course may not be elected concurrently.

Educational Ticker Tape . . .

(Continued from page 274)

year study, is in agreement with all other research published on this problem, said William H. Zeigel, director of admissions, Eastern Illinois University, who headed the study group. Even rank in high school is not dependable as a criterion for predicting success in college because of the differences in size of schools, per cent of student body attending college, and quality of instruction, the study group pointed out. Variables such as health, security, emotional stresses, incentives, motives, interests, and encouragements may cause a child with high mental abilities to fail or a child with less ability to succeed.

MILLION STUDENTS IN HOME STUDY

Over 750,000 new students enrolled in private correspondence schools of the U. S. in 1957, according to the National Home Study Council, Washington, D. C. The total active student body numbered over 1,000,000 at year's end. Enrollment was up four per cent over 1956. "Eighty per cent of home study students enroll to get ahead in their jobs or to prepare for new occupations," reports Homer Kempfer, executive director of the council. "The remainder enroll chiefly in academic and hobby courses." Radio, TV, and electronics were the most popular subjects, followed by religion, business, high school, mechanical trades, accounting, and art.

Craftsmen, foremen, and skilled workers outnumber all other occupational groups enrolled in home study courses. Over 20,000 employed adults enrolled in engineering, engineering technology, and architecture. Another 100,000 enrolled in air conditioning, appliance repair, drafting, and the building and mechanical trades. Business subjects enrolled 76,000. Nearly 33,000 more enrolled in accounting. One-fourth of all newly licensed certified public accountants each year have studied by correspondence.

For a directory of 53 schools meeting professional standards, write to the National Home Study Council, 1420 New York Ave., Washington 5, D. C.

STUDENT RESPONSIBILITY FOR EDUCATIONAL PROBLEMS

The U. S. National Student Association has received a $25,000 grant from the Fund for the Advancement of Education for a year-long program to develop student responsibility in relation to the basic problems facing American higher education. Fifteen colleges were chosen as pilot campuses in the project which will seek to focus student attention on faculty shortages, the effectiveness of college teaching, and the need for more counseling for both high-school and college students. "Increasing the student's responsibility for his own education is a relatively revolutionary method of solving these problems," said Ray Farabee, USNSA president. "Students, along with faculty and administration, must now assume a more active role in the formulation of educational policy, not only for the sake of their own development as responsible members of the college or university but also because of their immediate stake in the effectiveness of their own education."

The project will run through Jan., 1959, at which time it is expected that permanent programs will have been planned or already undertaken on about 400 college campuses to widen the scope and depth of student responsibility in educational planning and processes.

FEDERAL FUNDS FOR CLASSROOMS

Allocations of more than $25,000,000 in Federal funds to help finance construction of urgently needed classrooms for children living on or near Federal installations were announced last month by U. S. Commissioner of Education Lawrence G. Derthick. Congress extended the present program to June 30, 1959, and recently appropriated a total of $56,950,000 under the extension to aid in the construction of classrooms in local areas affected by Federal activities.

The new allocations will assist 155 school districts of 31 states, Alaska, Guam, and Hawaii. Authorized projects total $23,966,444; expansion of previously approved projects total $1,239,150. It is estimated that local communities receiving these funds will add from 30 to 40% to the Federal allotments and substantially increase the amount spent for construction of needed classroom facilities.

MASSACHUSETTS' EXPERIMENTAL COLLEGE

Amherst, Smith, Mount Holyoke, and the University of Massachusetts have received a $20,000 grant from the Fund for the Advancement of Education to develop plans for a new experimental college in their area. Prof. Sidney R. Packard of Smith College, co-ordinator for co-operative projects in which the four institutions are already engaged, announced the establishment of a study committee which is to report Nov. 15. Shannon McCune, provost, University of Massachusetts, is chairman of the committee which also includes Profs. Donald Sheehan of Smith, Stuart M. Stoke of Mount Holyoke, and Cesar L. Barber of Amherst. The committee will "develop plans for a new experimental college aimed at producing education of the highest quality at a minimum cost per student and with as small a faculty relative to the size of the student body as new methods of instruction and new administrative procedures can make possible."

In outlining the project, Prof. Packard explained that the new college could be useful in several ways: as an end in itself, to help provide for the increasing number of college applicants; as a laboratory for experiments in methods which might be applied elsewhere; and as a vehicle for co-operative projects of interest to the four participating institutions. The study group will investigate and report on all aspects of the new institution, including the curriculum, size and character of the student body, faculty, physical facilities, finances, and other matters.

SHORTAGE OF INSPIRED TEACHERS

"Less attention is paid to teaching skills and abilities at the college level than at primary or secondary schools," said Prof. John J. Ahern, director of fire protection and safety engineering department, Illinois Institute of Technology, at the May meeting of the Society of Fire Protection Engineers, Chicago. Speaking on "Education—Our Future Insurance," Prof. Ahern stated that "much greater attention must be given to improving teaching in the colleges, if we are to attain our goal of salvaging our potential mental strength."

He also expressed concern over the insufficient number of qualified students enrolling as college freshmen. While students fail to finish college for many reasons, a high percentage drop out because of failing grades. "However," he pointed out, "in schools with stiff entrance examinations and high entrance requirements, a high mortality rate must of necessity indicate either poor testing or poor instruction. Here is the basic fault for which educational institutions must shoulder the blame."

The greatest obstacle to improving the American educational system will continue to be the serious shortage of inspired teachers. "This is our most difficult problem and one which we must all contemplate. Scholarships, new buildings, and more students are not going to be effective without good teachers."

HIGH-SCHOOL DEBATES ON COMPARATIVE EDUCATION

The Committee on Discussion and Debate Materials, National University Extension Association, announces the problem for the discussion and debate series for next year: "What system of education would best serve the interests of the people of the United States?" The discussion problems treat those features of British, French, and Russian education which best serve the interests of the people of the U. S. The debate propositions are concerned with the resolutions that the U. S. should adopt the essential features of the British, French, and Russian systems of education. Additional information may be ob-

tained from Dr. Bower Aly, executive secretary, Committee on Discussion and Debate Materials, 209 Villard Hall, University of Oregon, Eugene, Ore.

IMPROVING THE TEACHING OF MATH

The National Science Foundation has granted $100,000 to Yale University to initiate a new program aimed at improving the teaching of mathematics in secondary schools. Edward G. Begle, associate professor of mathematics at Yale, will head a School Mathematics Study Group consisting of leading college mathematicians and secondary school teachers. The program will have two main objectives: to improve the training of math teachers and to work on revisions in the mathematics curriculum now used in secondary schools, including junior high schools.

NEWS IN BRIEF . . .

No More Credit for Some Elementary Math: College credit for some of the more elementary work in mathematics is being eliminated at the State University of Iowa. Revised requirements in basic skill subjects credited toward graduation from the College of Liberal Arts gradually will remove the course, Mathematics Skills, from the campus scene. High-school students will be encouraged to take more math of a college preparatory nature, *e.g.*, algebra and geometry . . . **City Students Predominate in Agriculture School:** City students, with no farm experience, soon will predominate among the enrollments in Ohio State University's College of Agriculture, predicts Dean Leo L. Rummell. He reported to the university's board of trustees that the "typical" student in the College of Agriculture is "rapidly becoming an urban boy who is interested mainly in the numerous opportunities of industries related to agricultural production and marketing."

College Scholarship as a Sales Incentive: Carrier Corp. established a $10,000 trust fund for a four-year college scholarship as top award for a sales incentive contest in May among the retail salesmen for its ice-making equipment. The winning salesman may name any child to receive the scholarship . . . **Triple Summer Session at Columbia:** Columbia University's summer session students this year will be able to complete a full year's study in a course as a result of two sessions to supplement the regular summer session. The extended session will permit students to take more courses and will keep the university's facilities active throughout the year . . . **Trimester Calendar at Pittsburgh:** The University of Pittsburgh has adopted as a policy the trimester calendar plan aimed at increasing the effectiveness of the entire educational program. The plan, which calls for an academic year of three semesters instead of the usual two, was proposed by Chancellor Edward H. Litchfield to enable students to obtain a more thorough education in the same span of time which is now required to finish four years of college under the semester plan. By attending school for three terms yearly, students would be able to receive a liberal education in addition to professional training and thus achieve more complete preparation for careers.

Courses in Russian: A new full-year course in elementary Russian will be offered at Harvard this fall, primarily in response to requests from students in the sciences. "With this course," said Horace G. Lunt, associate professor of Slavic languages and literatures, "a student in science and mathematics should be able to get through Russian scientific publications with the aid of a dictionary." At Trinity College (Hartford, Conn.), as a service to research personnel, a special introductory course in scientific Russian will be offered as part of the summer session . . . **Aspirations and responsibilities of public professions** in American culture will be the subject of a new course next year at Wesleyan University . . . **The Fund for Adult Education** is offering for 1959-60 a program of study and training grants in liberal adult education and fellowships and scholarships in the mass media. Applications must be received by the Fund (200 Bloomingdale Rd., White Plains, N. Y.) not later than Oct. 15, 1958.

"The PTA: Watchdog of Our Schools," a series of articles appraising the effectiveness of the PTA, was prepared for release (April) by the North American Newspaper Alliance and may be obtained from such newspapers as the *Tulsa (Okla.) Tribune*, the *Tacoma (Wash.) News Tribune*, and the *Miami (Fla.) News* . . . **Wayne State University** has announced the dissolution of its department of aeronautical engineering, effective July 1. To expand facilities that are required would not be justified by the enrollment . . . **A new professional program in teacher training** at the University of Massachusetts will be offered this summer for graduates of liberal arts colleges. The concentrated program opens up a new source of teachers by enabling the graduates to take all necessary education courses in one summer to fulfill certification requirements of most public schools systems.

A "Fun with Pop" Committee has been organized under the sponsorship of DCA Food Industries, Inc., to launch a public service program aimed at helping to build a happier family life through a closer relationship between fathers and their children. Committee members include: Ralph Edwards, honorary national chairman; Ralph G. Eckert, professor of family relations, University of Connecticut; Stanley Lehrer, managing editor, SCHOOL AND SOCIETY; Albert Ostrow, authority on family play; Jack Sokol, executive director, Association for Psychiatric Treatment of Offenders; Dr. Claudia Gips, child psychologist; and Jimmy Powers, sports columnist . . . **Tuition Hike at Kent:** Kent (Ohio) State University has raised fees from $201 to $267 per year for Ohio residents. The increase was needed for instructional personnel and also to make up, in part, for what appears to be a shrinkage in state funds due to an overestimation of state revenues . . . **School of the Liberal Arts** will be the new name of The College, University of Pittsburgh, effective this fall.

COMING EVENTS . . .

The 13th Annual National Conference, sponsored by the National Commission on Teacher Education and Professional Standards, NEA, Bowling Green (Ohio) State University, June 24-28. The conference will be devoted

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to a co-operative study of teacher education . . . **Foreign Policy Conference,** Colgate University, Hamilton, N. Y., July 1-5. Theme: "Requisites for an Ordered World" . . . **"Iron Curtains and Scholarship:** The Exchange of Knowledge in a Divided World" is the subject of the 23rd annual conference of Graduate Library School, University of Chicago, July 7-9 . . . **Institute on College and University Administration,** University of Michigan, Ann Arbor, July 7-11 . . . **"Racial Diversity in California Public Schools,"** a conference for teachers, University of California, Berkeley, July 11-12 . . . **American Library Association,** 77th annual conference, San Francisco, July 13-19. Theme: "International Responsibilities of the ALA."

NEW POSTS . . .

Arthur S. Flemming, president, Ohio Wesleyan University (Delaware), appointed U. S. Secretary of Health, Education, and Welfare, succeeding Marion B. Folsom who will resign Aug. 1 . . . **Fred F. Beach** is the new director, school administration branch, U. S. Office of Education . . . **Carter Davidson,** president, Union College (Schenectady, N. Y.), named chairman, Commission on Colleges and Industry, Association of American Colleges . . . **Wallace S. Girling,** vice-president, Ginn and Co., elected president, American Textbook Publishers Institute, New York City . . . **Harold Fields,** chairman, Board of Examiners, New York City Board of Education, will represent the U. S. at the International Conference on Public Education, Geneva, July 7-16. He also will serve as official U. S. delegate to the International Institute of Administrative Sciences, Liege, Belgium, June 27-July 3.

Rev. Richard C. Harrington, S.J., appointed dean, Graduate School, Creighton University (Omaha, Neb.) . . . **John E. Willard,** professor of chemistry, University of Wisconsin, named dean, Graduate School . . . **Phillip H. Phenix,** professor of education, Teachers College, Columbia University, appointed dean, Carleton College (Northfield, Minn.). Promotions, effective academic year 1958-59: Leith Shackel to deanship of women and Jane Andrews to directorship of placement . . . **Harold K. Wilson,** former director, division of intermediate registration, Pennsylvania State University, named associate dean for research and development . . . **Retiring this summer:** Paul E. Hemke, vice-president and provost, Rensselaer Polytechnic Institute (Troy, N. Y.); Atlee L. Percy, dean, Boston University; and Edgar H. Riley, associate professor of English, Lehigh University (Bethlehem, Pa.) . . . **Augustus H. Fox,** professor of mathematics, Union College, elected chairman, Federation of American Scientists.

RECENT PUBLICATIONS

(Continued from page 289)

WILSON, EUGENE S., and CHARLES A. BUCHER. *College Ahead!: A Guide for High-School Students — and Their Parents.* Pp. 168. Harcourt, Brace and Co., New York 17. $3.95.

WOLF, ANNA W. M. *Your Child's Emotional Health.* Pp. 28. Public Affairs Committee, New York 16. 25 cents (paper).

YZERMANS, VINCENT A. (editor). *Pope Pius XII and Catholic Education.* Pp. 180, 1957. Grail Publications, St. Meinrad, Indiana.

Earlier Writings

JONES, HOWARD M. *American Humanism: Its Meaning for World Survival.* Pp. 108. 1956. Harper & Bros., New York 16. $3.00.

KING, C. HAROLD, *A History of Civilization: The Story of Our Heritage, Earliest Times to the Mid-Seventeenth Century,* pp. 740, 1956, $6.25; MAY, ARTHUR J., *A History of Civilization: The Story of Our Heritage, The Mid-Seventeenth Century to Modern Times,* pp. 863, 1956, $6.25. Charles Scribner's Sons, New York 17.

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